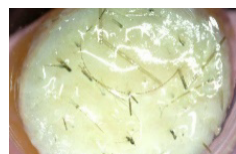


HUMAN EX VIVO MODELS TO INVESTIGATE COMPOUNDS FOR THE MANAGEMENT OF OILY SKIN AND ACNE VULGARIS

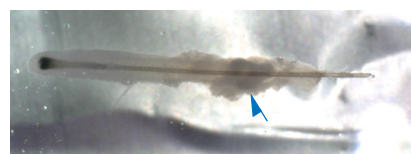


Acne vulgaris, commonly known as acne, is an inflammatory skin condition affecting mainly adolescents. It is caused by obstruction of the hair follicles resulting from dysfunctional keratinocyte differentiation leading to over-production of sebum by sebaceous glands and dysbiosis. The primary underlying cause is hormonal dysfunction but additional factors influencing severity of the condition have been also described (e.g. diet or changes in the composition of skin and hair follicle microbiota.)

Our method: *ex vivo* organ culture



Human full thickness skin with terminal hair follicles and sebaceous glands



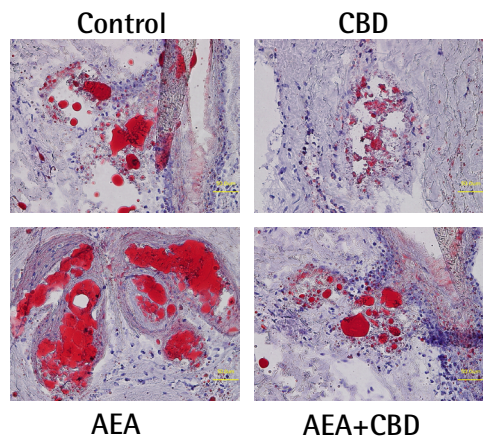
Human microdissected full-length hair follicles with sebaceous glands

Claim substantiation:

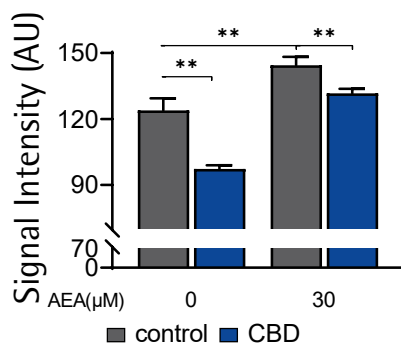
Reduction of inflammation & regulation of sebum production

INVESTIGATING THE EFFECT OF TEST COMPOUNDS ON SEBUM PRODUCTION AND SEBOCYTE FUNCTION IN HUMAN (SCALP) SKIN *EX VIVO*

CBD treatment reduces the lipid content of sebaceous glands in human skin *ex vivo*

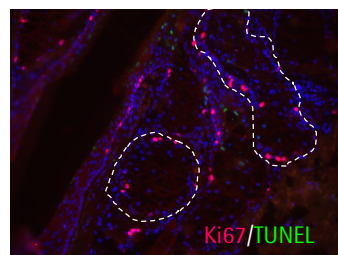


AEA (anandamide): an endocannabinoid known to increase sebum production; CBD: Cannabidiol (CBD)

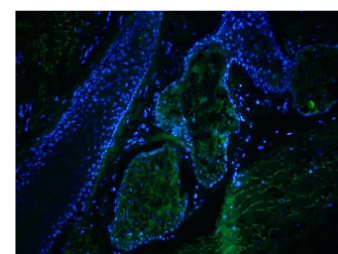


(Olah et al., J Clin Invest 2014)

Read-out parameters for sebocyte function



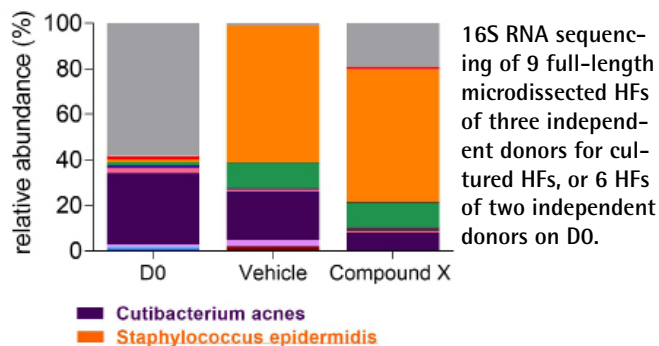
Analysis of sebocyte proliferation (Ki67) and apoptosis (TUNEL)



Analysis of Keratin 7 expression, an early sebocyte differentiation marker, in sebaceous glands

INVESTIGATING THE EFFECT OF A TEST COMPOUND ON MICROBIOME COMPOSITION IN HUMAN HAIR FOLLICLES *EX VIVO*

Compound X reduces the presence of Cutibacterium acnes



16S RNA sequencing of 9 full-length microdissected HF of three independent donors for cultured HFs, or 6 HFs of two independent donors on D0.

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- Androgen response
- Lipid analyses (MS/LS)

www.qima-lifesciences.com

Contact us

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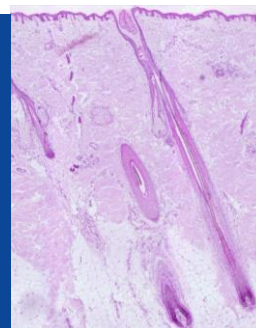


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