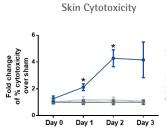
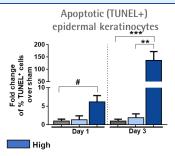
Investigating the effect of UV irradiation on skin

Study example: UVR exerts skin cytotoxicity and epidermal damage ex vivo



Epidermal Sunburn cells



H&F

 $low = 10J/cm^2 UVA+$ 20mJ/cm² UVB $high = 50J/cm^2 UVA +$ 50mJ/cm² UVB (solar UV spectrum)

Our method: Human fullthickness skin ex vivo organ culture

Stressors pollution, hydrogen peroxide...

Selection of our publications on the topic:

et al., Exp Dermatol 2010; Lu et al., J Invest

Gherardini et al., Int J Cosm Sci 2019; Poeggeler

Read-outs: viability, proliferation and apoptosis, necroptosis, DNA damage, sunburn cells...

available: UVR,

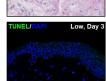
Dermatol. 2009; Bodo et al., Am J Pathol 2007 Haematoxylin & Eosin (H&E) histochemistry; TUNEL immuno-fluorescence

We can test your compounds ability to:

- Protect the skin or hair follicle from UVR
- Prevent formation of free radicals
- Protect the skin or hair follicles from pollutants possibly also with topical application!





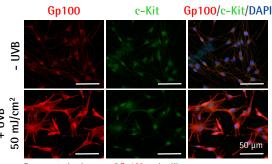


Low, Day 1

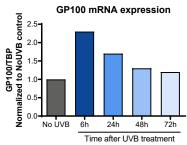


Study example: UVR stimulates melanogenesis in vitro

UVB treatment of melanocytes increased the expression of the melanogenesis associated marker GP100 and the level of tyrosinase

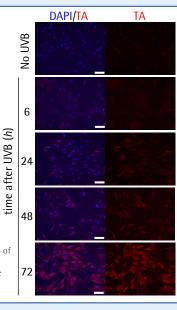


Representative images of Gp100 and c-Kit immunofluorescence in melanocytes without or 6 h after UVB treatment.

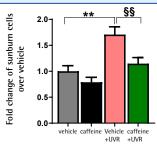


GP100 mRNA relative expression in the NHEMs was measured at different timepoints after UVB irradiation, housekeeping gene: TBP.

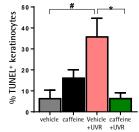
Representative images of the level of tyrosinase detected by enzymatic activity assay.



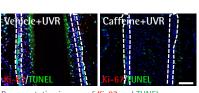
Study example: Caffeine protects cells from UV damage ex vivo



Number of sunburn cells in the epidermis of vehicle or caffeine treated skin. Pooled data from 2 donors, mean±SEM, **p<0.01,



Number of TUNEL+ keratinocytes in distal ORS of vehicle or caffeine treated HFs. Pooled data from 2 donors, mean±SEM *p<0.05, #p<0.05.



Representative images of Ki-67 and TUNEL Positive cells in the proximal hair follicle ORS.

Contact us for a customized study:

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For more details see also our webpage: www.monasteriumlab.com





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- Clinical trials carried out with strategic partners for healthy skin and hair benefits
- Comprehensive project reports & manuscript drafting and submission

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