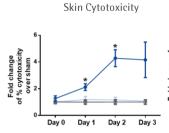
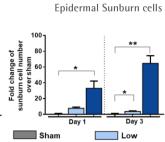
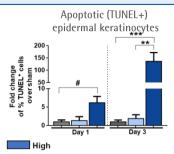
# Investigating the effect of UV irradiation on skin

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







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

Our method: Human fullthickness skin ex vivo organ culture

Stressors available: UVR, pollution, hvdrogen peroxide...

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

cells...

Selection of our publications on the topic:

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

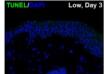
Gherardini et al., Int J Cosm Sci 2019; Poeggeler

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

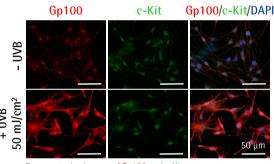


Haematoxylin & Eosin (H&E) histochemistry; TUNEL immuno-fluorescence

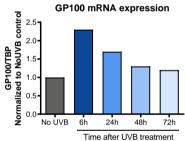
Dermatol. 2009; Bodo et al., Am J Pathol 2007

### 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

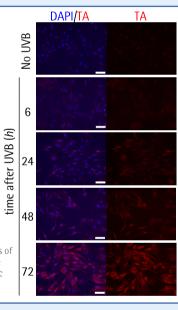


Representative images of Gp100 and c-Kit immunofluorescence in melanocytes without or 6 h after UVB treatment.

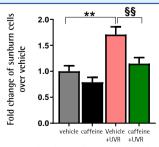


GP100 mRNA relative expression in the NHEMs was measured at different timepoints after UVB irradiation, housekeeping gene: TBP.

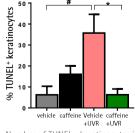
Representative images of the level of tyrosinase detected by enzymatic



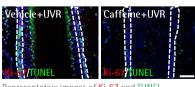
#### Study example: Caffeine protects cells from UV damage ex vivo



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:

CEO:

Dr. Marta Bertolini (PhD)

Dr. Janin Edelkamp (PhD)

m.bertolini@monasteriumlab.com j.edelkamp@monasteriumlab.com + 49 (0)251 93263-080



**Monasterium Laboratory** Skin & Hair Research Solutions GmbH Mendelstr. 17, 48149 Muenster, Germany

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# Reasons why you should choose Monasterium Laboratory:

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

For enquiries, please contact:

CEO:

Dr. Marta Bertolini (PhD) m.bertolini@monasteriumlab.com + 49 (0)251 93263-080