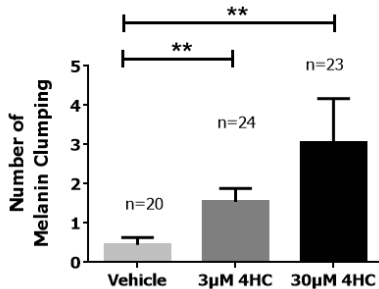


# Investigating effects on skin and hair cytotoxicity

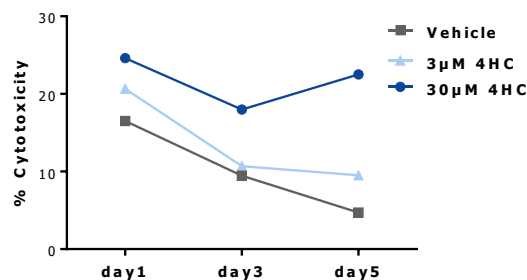
Study example: Compound X induces hair follicle cytotoxicity *ex vivo*

Our method:  
Human healthy  
microdissected  
full-length hair  
follicle *ex vivo* organ  
culture

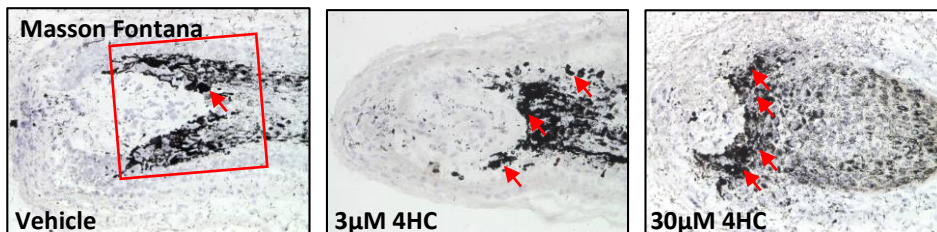
4-Hydroperoxy  
Cyclophosphamide  
(4HC):  
chemotherapy agent  
metabolite



Pooled data from 3 independent experiments.  
Mean±SEM n=20-24HFs from 3 donors



Data from 1 experiment, Mean±SEM n=12  
HFs from 1 donor



Masson Fontana: histochemical staining revealing melanin content  
Red marked area shows region of analyses, red arrows show melanin clumps

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

Skin Cytotoxicity

Epidermal Sunburn cells

Apoptotic (TUNEL+) epidermal keratinocytes

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

Our method:  
Human full-  
thickness skin *ex vivo*  
organ  
culture

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

Selection of  
our publications  
on the topic:

Gherardini et al., Int J Cosmet  
Sci 2019; Poeggeler et al.,  
Exp Dermatol 2010; Lu et  
al., J Invest Dermatol. 2009;  
Bodo et al., Am J Pathol  
2007

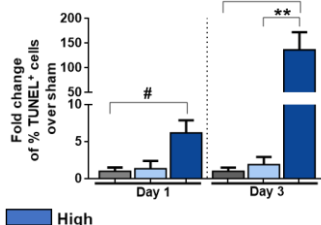
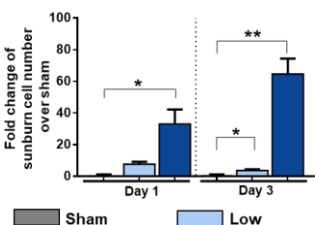
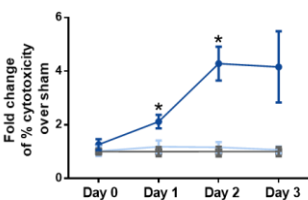
Read-outs: viability,  
proliferation and  
apoptosis,  
necroptosis, DNA  
damage, sunburn  
cells...

Contact us for a  
customized study:

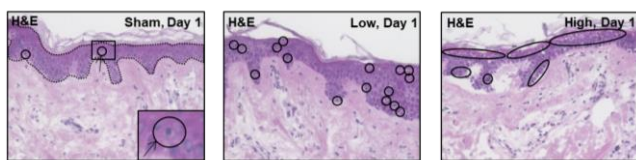
CEO:  
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CSO:  
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j.edelkamp@monasteriumlab.com  
+ 49 (0)251 93263-080

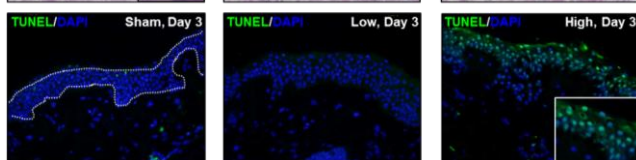
For more details see also our webpage:  
[www.monasteriumlab.com](http://www.monasteriumlab.com)



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!...

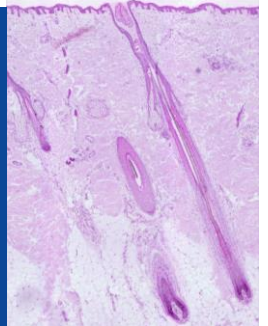


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CEO:  
Dr. Marta Bertolini

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