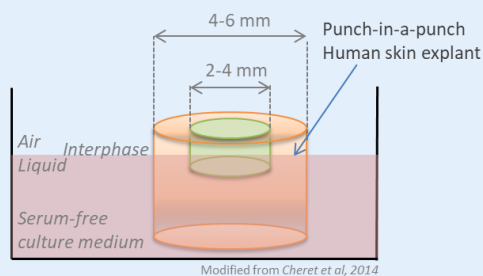


# Investigating effects on acute and pathological wound-healing

## Our Method

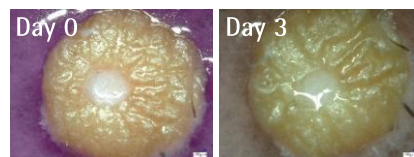


Acute and pathological wound healing models using human full-thickness skin *ex vivo* with partial thickness wounds

### Read-out parameters:

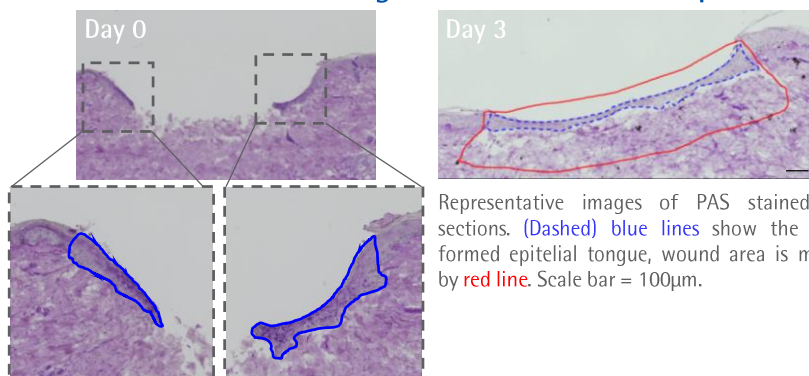
keratinocyte migration, re-epithelialisation, keratinocyte proliferation and apoptosis, associated keratin, angiogenesis, immune cells, transcriptome analysis...

Substances can be applied either topically or systemically



Macroscopic images of wound closure over time.

Complete wound closure during the culture under acute wound healing conditions in selected punches

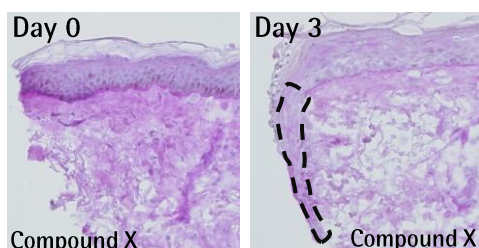


Representative images of PAS stained skin sections. (Dashed) blue lines show the newly formed epithelial tongue, wound area is marked by red line. Scale bar = 100µm.

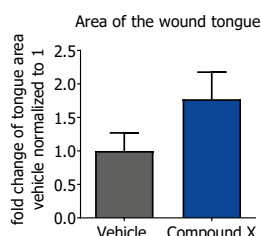
Selection of our publications on the topic: Post et al., Arch Dermatol Res 2021; Liao et al., Arch Dermatol Res 2019; Nasir et al., Wound Repair Regen 2018; Langan et al., Arch Dermatol Res. 2018; Tsai et al., Exp Dermatol 2017; Busse et al., J Invest Dermatol 2014; Meier et al., PLoS One 2013

## Study example: Compound X promotes wound-healing *ex vivo*

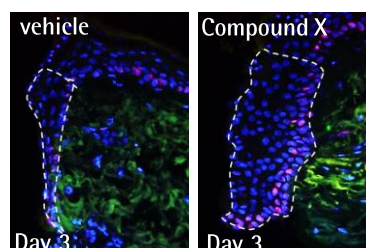
1. Compound X promotes re-epithelialization of the newly generated wound tongue



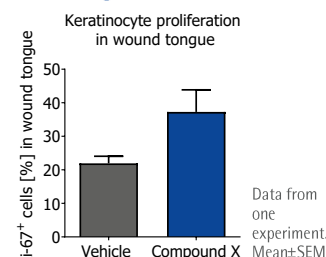
Haematoxylin Et Eosin (H&E) histochemistry



2. Compound X increases keratinocyte proliferation in the newly generated wound tongue



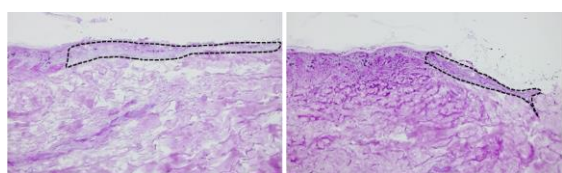
Immunofluorescent staining of Ki67+ cells (proliferating cells)



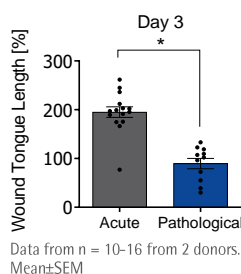
Data from one experiment. Mean±SEM

## Pathological Wound Healing *ex vivo*

1. Wound-healing is impaired under pathological conditions

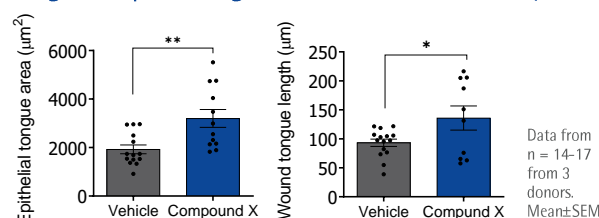


Representative images of PAS stained skin sections. Black lines show the newly formed epithelial tongue.



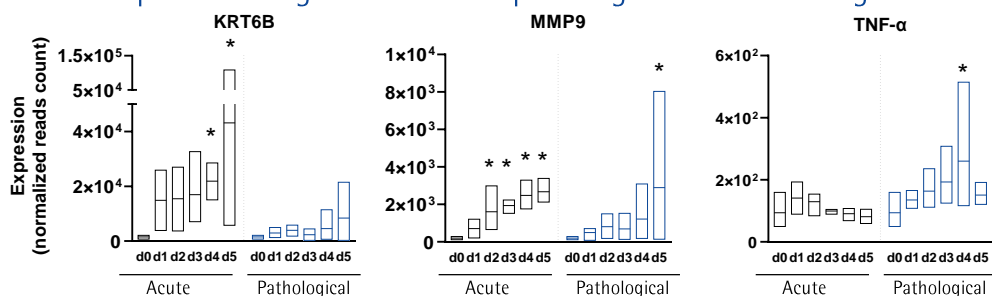
Data from n = 10-16 from 2 donors. Mean±SEM

3. Compound X increases wound tongue area and length in pathological wounds after 3 days



Data from n = 14-17 from 3 donors. Mean±SEM

2. Transcriptomic changes in acute and pathological wound healing conditions *ex vivo*



Contact us for a customized study:

Acting CEO:  
Dr. Marta Bertolini (PhD)  
CSO:  
Dr. Janin Edelkamp (PhD)

m.bertolini@monasteriumlab.com  
j.edelkamp@monasteriumlab.com

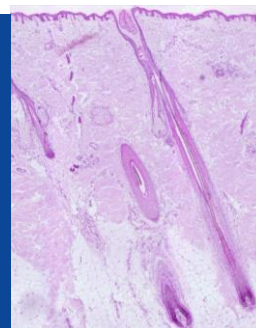


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## Monasterium Laboratory

Skin & Hair Research Solutions GmbH  
Mendelstr. 17, 48149 Münster, Germany

[www.monasteriumlab.com](http://www.monasteriumlab.com)

For enquiries, please contact:

Acting CEO:

Dr. Marta Bertolini (PhD)

[m.bertolini@monasteriumlab.com](mailto:m.bertolini@monasteriumlab.com)

+ 49 (0)251 93263-080