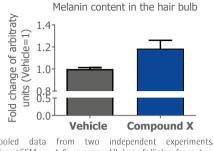
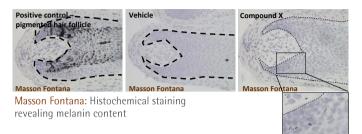
Investigating the effect of a test compound on hair follicle pigmentation

Study example: Compound X stimulates pigmentation in gray hair follicles

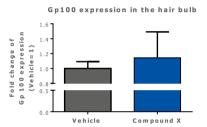
1. Compound X stimulates melanin production



Pooled data from two independent experiments. Mean±SEM, n=4-6 <u>anagen VI</u> hair follicles from two donors

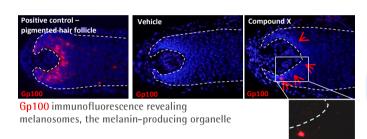


2. Compound X tendentially promotes the formation of new melanosomes



Pooled data from two independent experiments.

Mean±SEM, n=5-8 anagen VI hair follicles from two donors.

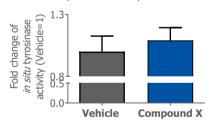


Selections of our publications on the topic:
Chéret et al., Br J Dermatol. 2020; Hardmann et al., J Invest Dermatol 2015; Samuelov et al., J Invest Dermatol 2013; Gaspar et al., J Invest Dermatol 2011

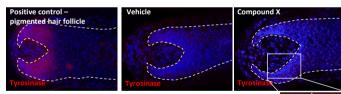
Read-outs:
Hair Pigmentation,
Melanocyte Maturation,
Melanin Transfer,
Activation Melanogenesis,
Growth Factors regulating
Pigmentation

3. Compound X tendentially increases the activity of tyrosinase

Tyrosinase activity in the hair bulb



Pooled data from two independent experiments. Mean±SEM, n=4-5 <u>anagen VI</u> hair follicles from two donors.



In situ assay revealing the enzymatic activity of tyrosinase, the rate-limiting enzyme regulating melanin production





Human microdissected amputated white hair follicles



Human microdissected amputated pigmented hair follicles

Our method: Ex vivo organ culture of human healthy microdissected pigmented or gray/white hair follicle (Langan et al., Exp Dermatol 2015; Kloepper et al., Exp. Dermatol 2010)



Monasterium Laboratory Skin & Hair Research Solutions GmbH Mendelstr. 17, 48149 Muenster, Germany Founder & CEO: Prof. Dr. Ralf Paus

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 + 49 (0)251 93263-080

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





State-of-the-art technology and expertise for all your pre-clinical, mechanistic, and clinical needs in dermatology research.

- Pre-clinical Research
- Clinical Research
- Education



"We combine
our unique expertise,
our project design creativity,
and our passion to advance
our clients' success in
delivering novel and gamechanging skin and hair
research solutions"

Founder & CEO: Prof. Dr. Ralf Paus

Your one-stop source for all *in vitro*, *ex vivo* and *in vivo* testing plus additional services.

Monasterium Laboratory

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

www.monasteriumlab.com

Reasons why you should choose Monasterium Laboratory:

- · Cutting edge methodologies and techniques
- Tailor-made & customized assays for all needs
- A focus on novel targets and therapeutics for skin & hair disorders: identify-characterize-validate
- Delivering mechanistic action stories, biomarkers & predictors of response
- Claims support for cosmetic ingredients in skin or hair follicle models
- Clinical trials carried out with strategic partners for healthy skin and hair benefits
- Comprehensive project reports & manuscript drafting and submission

For enquiries, please contact:

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