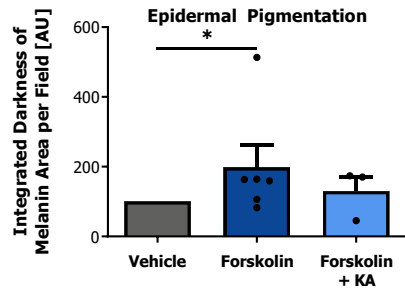


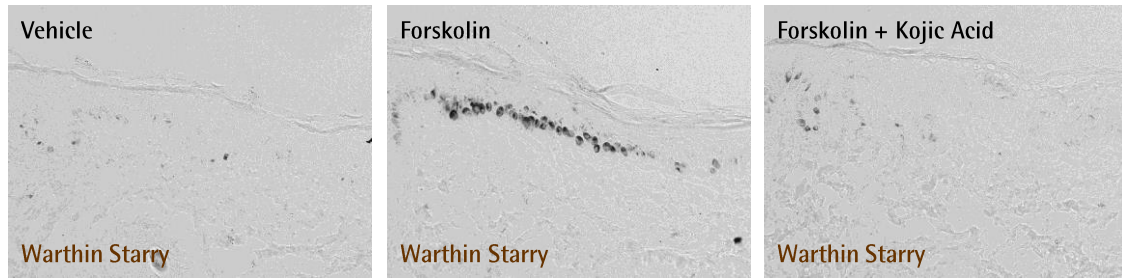
Investigating the effect of a test compound on skin pigmentation

Study example: Forskolin stimulates pigmentation in the skin

1. Forskolin stimulates melanin production



Data from one experiment, n = 3-6 donors. Mean±SEM



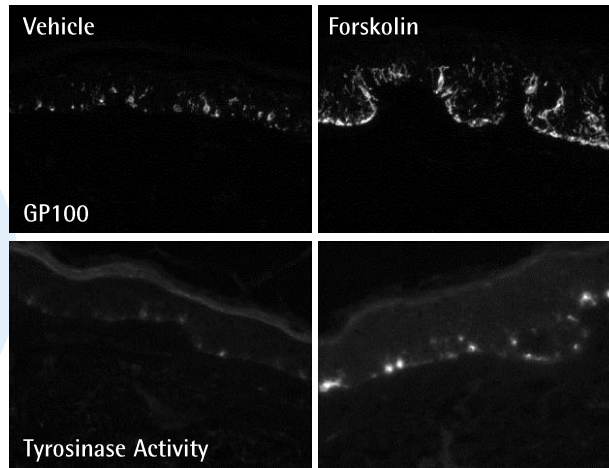
Warthin Starry: Histochemical staining revealing melanin content

Forskolin is found in the roots of the *Coleus Forskohlii* plant, and is a stimulator of melanogenesis. Kojic Acid (KA), i.e. tyrosinase inhibitor

Claim substantiation:

- skin lightening
- Skin tanning

2. Forskolin promotes the formation of new melanosomes

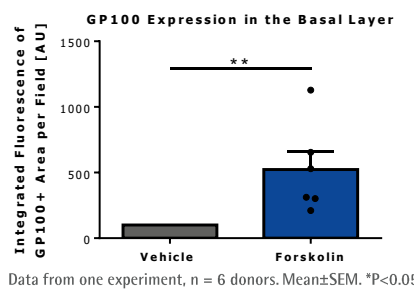


GP100 immunofluorescence revealing melanosomes, the melanin-producing organelle

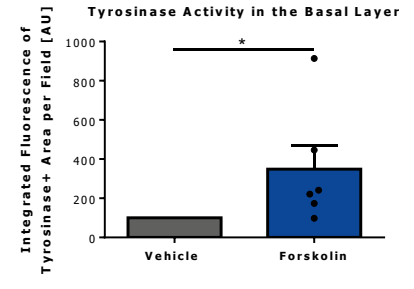
Selection of our publications on the topic:
 Bertolini et al., Int J Cosmet Sci. 2020; Hardmann et al., J Invest Dermatol 2015; Samuelov et al., J Invest Dermatol 2013; Gaspar et al., J Invest Dermatol 2011; Florei et al., Pigment Cell Melanoma Res 2011.

Our method: *Ex vivo* organ culture of full-thickness human skin (Lu et al., Exp Dermatol 2007)

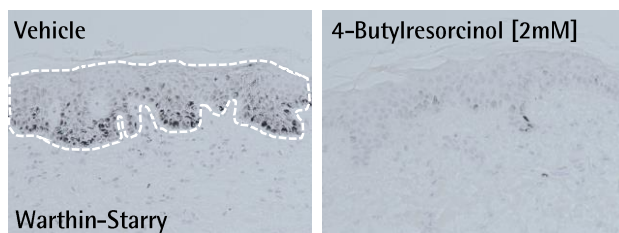
Read-outs: Skin Pigmentation, Skin Lightening, Melanocyte Maturation, Melanin Transfer, Activation of Melanogenesis, ...



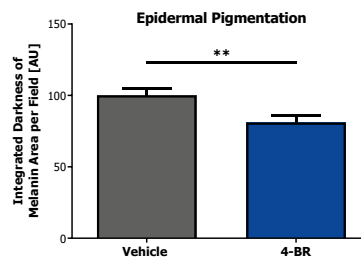
Data from one experiment, n = 6 donors. Mean±SEM. *P<0.05



Study example: Topical application of 4-BR inhibits epidermal melanogenesis



4-BR: hypopigmenting agent and tyrosinase inhibitor



Data from 5 donors. Mean±SEM. **P<0.01

Contact us for a customized study:

Principal Scientist: Dr. Marta Bertolini (PhD)
 COO: Dr. Janin Edelkamp (PhD)

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

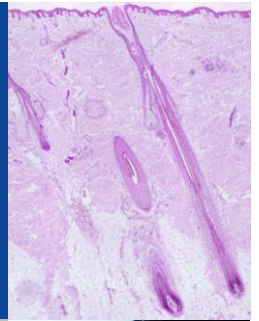
For more details see also our webpage:
www.monasteriumlab.com



**MONASTERIUM
LABORATORY**
Skin & Hair Research Solutions



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



- ▶ Preclinical Research
- ▶ Clinical Research
- ▶ Innovative Technologies Program
- ▶ Education



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

Founder & CEO:
Prof. Dr. Ralf Paus

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

Monasterium Laboratory

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

www.monasteriumlab.com

For enquiries, please contact:

Principal Scientist & Deputy General Manager:
Dr. Marta Bertolini (PhD)

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