

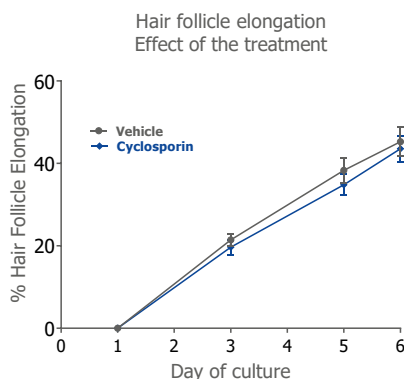
Investigating the effect of a test compound on hair growth and anagen-catagen conversion

Case study: Cyclosporin maintains hair follicles longer in anagen *ex vivo*

1. Cyclosporin maintains the normal rate of hair elongation (hair shaft production)

Our method:
Human healthy
microdissected
amputated
hair follicle *ex vivo*
organ culture

Cyclosporin:
is an immunosuppressant
drug which induces
unwanted hair growth as
side effect *in vivo* and
prolongs anagen *ex vivo*
(Hawkshaw et al., PLoS
Biol 2018)



Pooled data from 3 independent experiments,
Mean±SEM, n=21-22 HF analysed/group from 3
donors

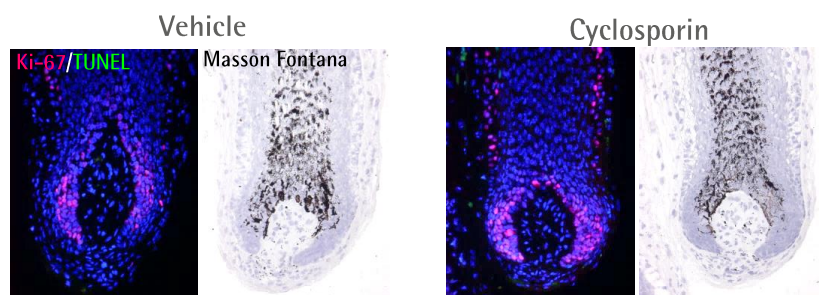


Amputated
microdissected
hair follicle at
day 0, after
isolation



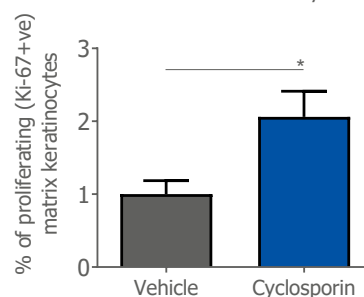
Amputated microdissected hair follicle at
day 6 of organ culture: Note the newly
formed hair shaft and outer root sheath

2. Cyclosporin significantly increases cell proliferation in the hair follicle matrix



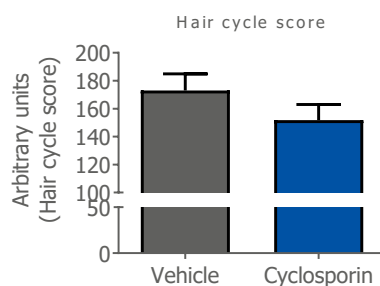
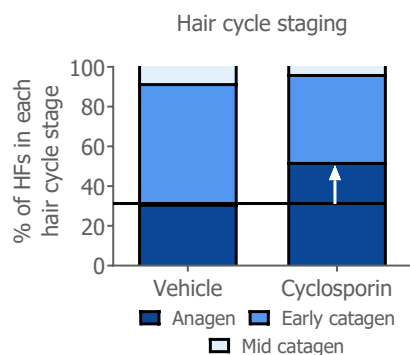
Ki-67: marker for proliferation. **TUNEL:** marker for apoptosis.
Masson Fontana: histochemical staining revealing melanin content

% of proliferative
hair matrix keratinocytes



Pooled data from 3
independent experiments.
Mean±SEM n=26-28HFs
analysed/group from 3
donors. *p<0.05.

3. Cyclosporin maintains hair follicles longer in anagen



Pooled data from 3 independent experiments. Mean or Mean±SEM
n=26-28HFs analysed/group from 3 different donors.

Selections of
our publications
on the method:
Langan et al., Exp
Dermatol 2015;
Kloepper et al., Exp.
Dermatol 2010

Selections of
our publications
on the topic:
Chéret et al., Nat Commun
2018; Alam et al., Br J
Dermatol 2018; Parodi et
al, PLoS Biol. 2018

Read-outs: Hair Follicle Growth, Hair Shaft Production, Anagen (Growth Phase) Maintenance, Catagen (Regression Phase) induction, Proliferation and Apoptosis of Hair Matrix Keratinocytes, etc.

Contact us for a
customized study:

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