

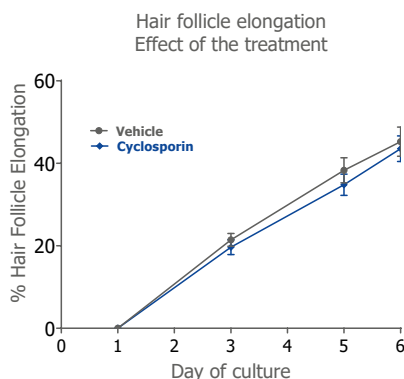
Investigating the effect of a test compound on hair growth and anagen-catagen conversion

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

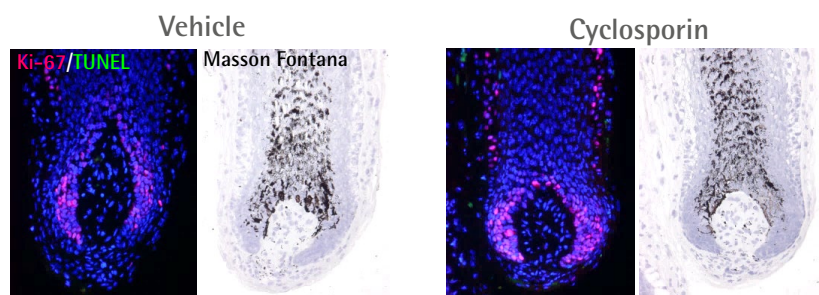


Amputated microdissected hair follicle at day 0, after isolation



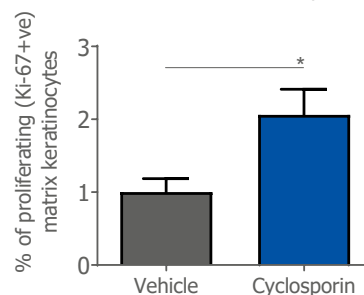
Amputated microdissected hair follicle at day 6 of organ culture: Note the newly formed hair shaft and outer root sheath

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



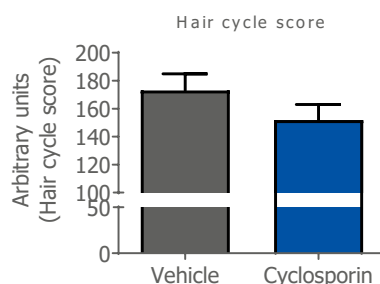
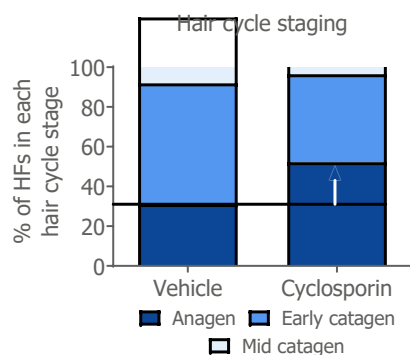
Ki-67: marker for proliferation. TUNEL: marker for apoptosis.
Masson Fontana: histochemical staining revealing melanin content

% of proliferative hair matrix keratinocytes



Pooled data from 3 independent experiments. Mean±SEM n=26-28 HF 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=26-28 HF 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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