

## MiR-21-3p INHIBITORS: CORTICOSTEROID REPLACEMENT THERAPY FOR SKIN PATHOLOGIES

*From inoffensive juvenile acne to incurable psoriasis, skin diseases concern the majority of the population. These skin diseases are due to chronic or acute inflammation and are currently treated with anti-inflammatory drugs which are often inefficient for a long term cure.*

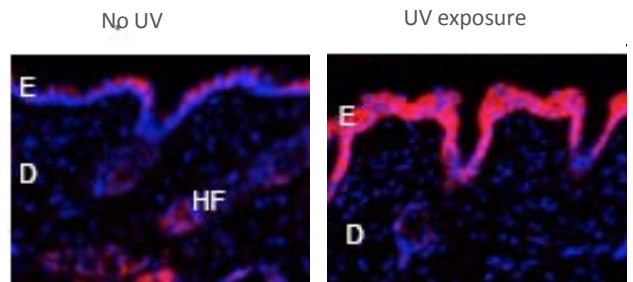
### DESCRIPTION

The inventors have identified miR-21-3p, a novel UV-induced miRNA in the epidermis. miR-21-3p is activated by the PPAR $\beta/\delta$  / TGF $\beta$ -1 cascade and is found in high level in psoriatic skin and squamous cell carcinomas. They provide evidence that the inhibition of miR-21-3p with an antagonist micro RNA reduces UV-induced inflammation on skin biopsies.

### STAGE OF DEVELOPMENT

miR21-3p inhibitor was applied on patient skin biopsies with a significant diminution of the molecular inflammation.

Moreover, topical application of the inhibitor on the skin of mice showed that the inhibitor preferentially binds on the inflamed skin reducing the risk of a systemic effect.



Increase of miR21-3p (pink) in epidermis upon UV exposure

### ADVANTAGES

MiR21-3p inhibitor dedicated to inflammatory skin diseases could replace conventional corticosteroid based therapies known to have side effects and resistance problem.

This treatment could be developed for skin disorders such as psoriasis, UV erythema, skin cancer and would healing.

### INTELLECTUAL PROPERTY

Priority date: February 14, 2014

PCT/EP2015/053043 patent application

in the name of the University of Lausanne and naming as inventors G. Degueurce, L. Michalik, I. D'Errico, W. Wahli and A. Montagner.

Patent application is pending in Europe and in US

### COLLABORATION TYPE

PACTT offers to grant exclusive or non exclusive license to industrial partners able to develop and commercialize the technology.

### PUBLICATION

Degueurce et al., EMBO mol. Med, 2016

### REFERENCE

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