

# 3D in vitro model for atopic dermatitis

*Commonly used acronym: RHE-AD*

*Created on: 21-04-2022 - Last modified on: 22-04-2022*

## Contact person

Christel Boudry

## Organisation

**Name of the organisation** straticell

**Department** Straticell

**Country** Belgium

**Geographical Area** Walloon

## SCOPE OF THE METHOD

<b>The Method relates to</b>	Human health
<b>The Method is situated in</b>	Basic Research
<b>Type of method</b>	In vitro - Ex vivo
<b>Specify the type of cells/tissues/organs</b>	Reconstructed human Epidermis

## DESCRIPTION

### Method keywords

LXR

preclinical

skin model

therapeutic

JAK/STAT

in vitro

### **Scientific area keywords**

dermatitis

Skin equivalents

drug screening

Atopic dermatitis

Skin barrier

cytokines

### **Method description**

Recent advances in the development of human-based *in vitro* models offer new tools for drug screening and mechanistic investigations of new therapeutic agents. However, there is a lack of evidence that disease models respond favourably to potential drug candidates. Atopic dermatitis (AD) is a very common disease associated with an altered skin barrier and chronic inflammation. Here, we demonstrate that the AD-like features of a reconstructed human epidermis (RHE) model treated with Th2 cytokines are reversed in the presence of molecules known to have a beneficial effect on damaged skin as a result of modulating various signalling cascades including the Liver X Receptors and JAK/STAT pathways. This work shows that standardized and reproducible RHE are relevant models for therapeutic research assessing new drug candidates aiming to restore epidermal integrity in an inflammatory environment.

### **Method status**

Internally validated

Published in peer reviewed journal

## **REFERENCES, ASSOCIATED DOCUMENTS AND OTHER INFORMATION**

### **References**

DOI: 10.1111/exd.13810

### **Associated documents**

[Hubaux et al. 2018\\_Exp Derma.pdf](#)

## Links

[company website](#)

[company linkedin](#)

*Coordinated by*



*Financed by*

