3D in vitro model for atopic dermatitis

**Commonly used acronym:** RHE-AD

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**SCOPE OF THE METHOD**

<table>
<thead>
<tr>
<th>The Method relates to</th>
<th>Human health</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Method is situated in</td>
<td>Basic Research</td>
</tr>
<tr>
<td><strong>Type of method</strong></td>
<td>In vitro - Ex vivo</td>
</tr>
<tr>
<td><strong>Specify the type of cells/tissues/organs</strong></td>
<td>Reconstructed human Epidermis</td>
</tr>
</tbody>
</table>

**DESCRIPTION**

**Method keywords**

LXR  
preclinical  
skin model  
therapeutic  
JAK/STAT
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.
Hubaux et al. 2018_Exp Derma.pdf

Links

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