1. Dermis preparation

- NaCl
- Peel off and discard epidermis
- Keep and wash decellularized dermis

2. Keratinocyte preparation

- Trypsin
- Peel off epidermis and scrape keratinocytes from papillary side
- Collect scraped cells, centrifuge and pellet
- Seed onto irradiated 3T3 fibroblasts until ~80% confluent

3. DED-HSR set up

- Keratinocytes
- Migration ring
- Silicone seal
- DED

4. Lateral migration and treatment of DED-HSR

- Keratinocyte migration across DED
- Porous metal grid
- Media with factors
- Adhesion/growth of keratinocytes
- Removal of migration ring and lifting of DED-HSR to air-liquid interface

5. Lateral view before/after outgrowth and assessment of cellular layer/stratum corneum

<table>
<thead>
<tr>
<th>Schematic</th>
<th>Actual</th>
<th>Schematic:Histology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before outgrowth</td>
<td>After outgrowth</td>
<td>Stratum corneum Cellular layer</td>
</tr>
</tbody>
</table>

Supplementary figure 1
C. 

![Cosmetic score chart](chart.png)

D. 

![Histological score chart](chart.png)

E. 

![Skin thickness (μm) chart](chart.png)

F. 

![% OGT chart](chart.png)

Supplementary figure 2
I. Lane 1 2 3
MF + - -
MF-FABP5 deplete - + -
Captured FABP5 - - +

J. % repair versus day 0

K. VEGF (pg/mg protein)

Supplementary figure 3
Supplementary Figure 4