

Engineered skin cells may replace animals in cosmetic testing

An advanced 3D skin model developed at King's College London (KCL) may reduce the need for animal models in cosmetic testing.

The model uses stem cell derived keratinocytes, the primary cell type of the epidermis, the outermost layer of skin. Over time, they were able to build up the cells into a 3D structure called a human epidermal equivalent, or HEE, that both physically and functionally resembles the natural permeable barrier of the skin.

HEE models are widely used to test skin disorders, drugs, and cosmetics in the laboratory. However, previous models have been limited by two key aspects: development and scalability. First, they were not able to engineer a functional permeability barrier. Second, stem cells generated from a biopsy sample of epidermis could only produce a limited number of HEEs; furthermore, they may contain mutations that could affect experimental results.

Read the full, original story: 'Realistic' skin cells grown in lab