

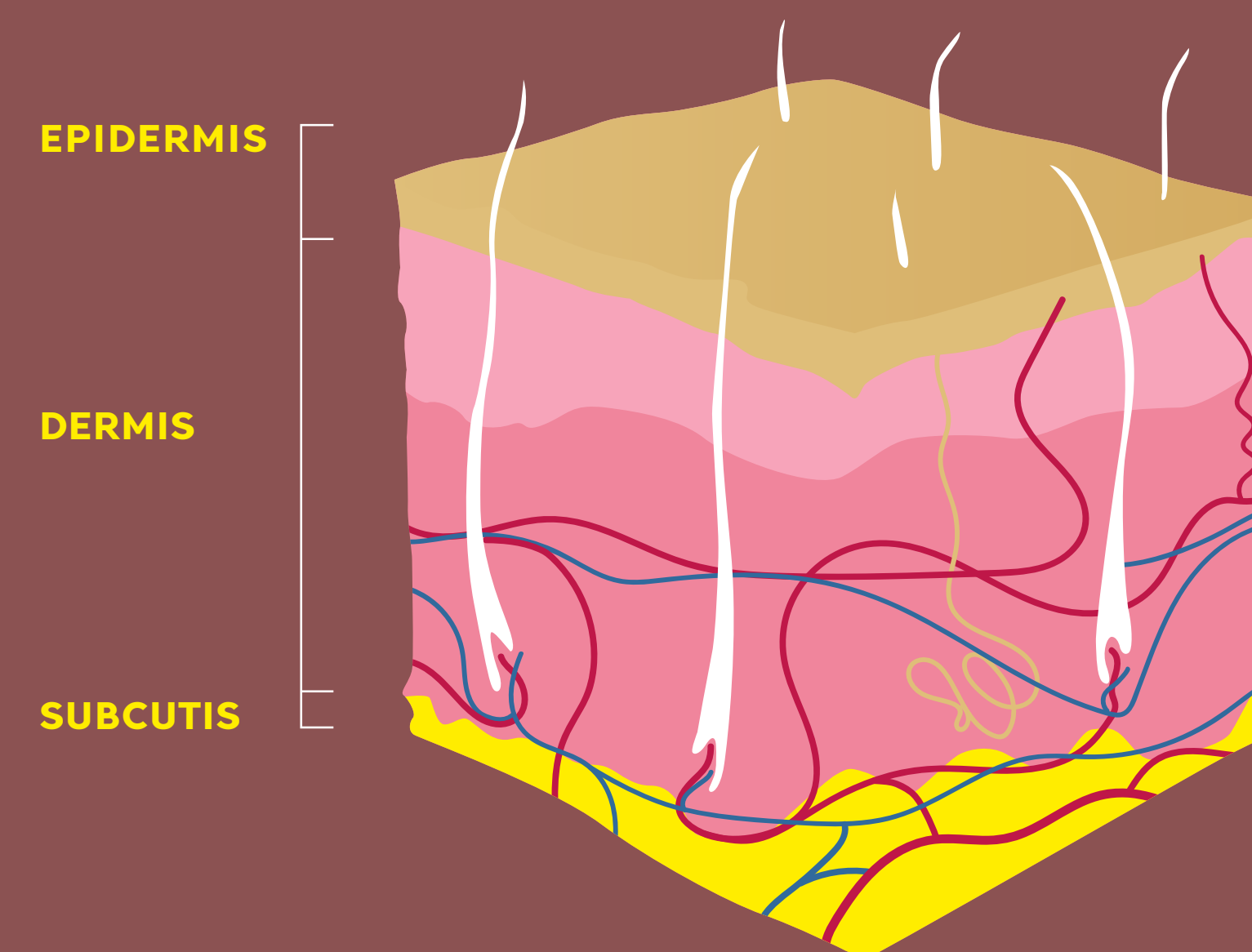
**#stemcells
forlife**

Get out your smartphone
to learn more!

stemcells4life.info



Structure of our skin



WHERE DO WE STAND?

What do we know?

The human skin consists of three layers. Different types of stem cell types are responsible for its regeneration. Skin transplants grown from stem cells do not match the natural skin, however, because so far they have only been generated from stem cells of the epidermis, the outermost layer of the skin. They lack skin appendages such as the sweat and sebaceous glands and hair roots.

What are we investigating?

To ensure that artificial skin transplants function as well as possible, scientists are investigating methods that enable transplants to be produced that have sweat and sebaceous glands and hair follicles. They are also attempting to treat congenital skin conditions using genetically modified skin stem cells. This method has already been used to treat the first cases of epidermolysis bullosa successfully.

STEM CELLS AND OUR LARGEST ORGAN

The skin and skin diseases

Our skin protects us from external influences.

To do this job, it renews itself every four weeks – using stem cells. The study of these cells is the basis for growing tissue in the laboratory that can be used for skin transplants for burn patients and for skin conditions.

1

Growing the
different
elements of
the skin

2

Eliminating the
need for animal
cells for growing
skin cells

3

Making
transplant
methods
available to
more patients

4

Treating
congenital skin
conditions

WHAT DO WE WANT TO ACHIEVE?

In the future, scientists hope to develop methods for producing different types of skin and quickly make the tissue obtained this way available for patients such as burn victims.



GermanStemCellNetwork