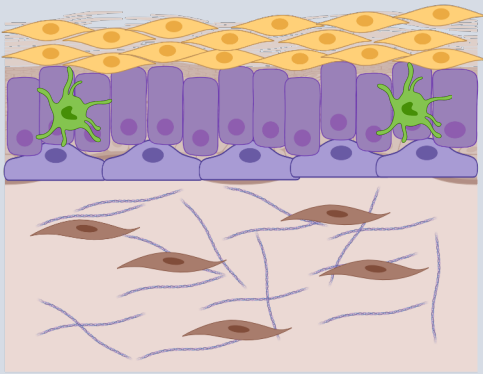



# Systems Immunology Group


## What We do


- We carry out research to try and learn more about your skin and how it interacts with your immune system.
- We investigate the changes that take place in skin with conditions such as eczema and psoriasis.
- We use computer models to try and predict how your skin will react under different conditions.

## What is your skin made of?

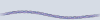


 Outer dead skin cells called keratinocytes protect from the outside environment.

 Younger keratinocytes underneath replace dead ones in a few days.

 Langerhans cells sense outside dangers to the skin and tell the immune system when to act.

 Fibroblasts support the skin by creating a scaffold structure to build on.

 Collagen fibers are like ropes that form the scaffold of the dermis.

## Why is your skin important?

- Your skin provides a barrier that protects you from things in the environment that could cause you harm, for example bad bacteria or chemicals.
- Your skin helps to protect you from the harmful effects of the sun.
- Your skin can detect when you are hurt and instruct cells to repair the damage.
- Your skin can recognise some bad bacteria and viruses and tell your body to produce an immune response.

## Find out more!

- Follow us on Twitter! @SIG\_PolakLab
- Visit our website, <https://www.southampton.ac.uk/ita/index.page?>