



Scibase use case on the Peltarion platform & Azure

# Can a pen from the future change the lives for millions of children with eczema, asthma and allergies?

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Simon Grant, CEO of Scibase, believes that medical technology and deep learning can change lives in the near future. Click [here](#) to see a video interview.

**Imagine a pen that you put against your skin, and it gives you information about your health. Science fiction? Let's start from the beginning so that you can understand the amazing things SciBase are working on.**

**10% of the world's population. That is the number of human beings who have atopic dermatitis, commonly known as atopic eczema. It is a chronic condition, closely linked to asthma, allergies and hay fever, that causes suffering and severely limits the quality of life of those afflicted.**



## 01/ Long experience from skin cancer detection

SciBase provides healthcare practitioners all around the world with a device called Nevisense for accurate detection of malignant melanoma (skin cancer).

The SciBase method is based on a technology called Electrical Impedance Spectroscopy (EIS), which uses the electrical properties of human tissue to categorize cellular structures and thereby detect anomalies.



## 02/ The next big step; Atopic dermatitis and Eczema

In the western world, about 20% of all children are born with atopic dermatitis. These numbers have tripled over the last three decades in the developed world, as a result of lifestyle changes and what chemicals we are exposed to throughout our lives.

Atopic eczema is a chronic condition, closely linked to asthma, allergies and hay fever, that causes suffering and severely limits the quality of life of those afflicted.

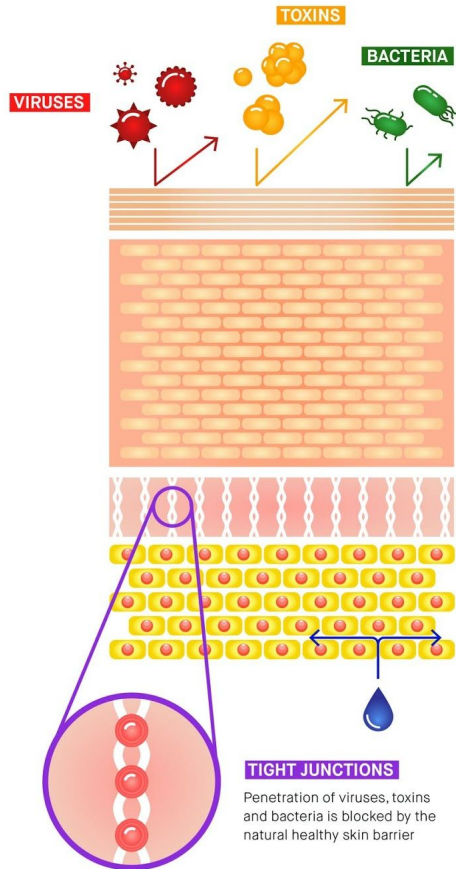
### **The skin barrier; our real protection shield**

What is it exactly? You can think of the skin barrier like a protective brick wall, where the cells are the bricks, and the Stratum corneum lipid matrix is the mortar in between the bricks. The barrier functions as a crucial protective barrier from environmental irritants and harmful microbes. At the same time, it holds in the moisture, preventing your skin from drying out.



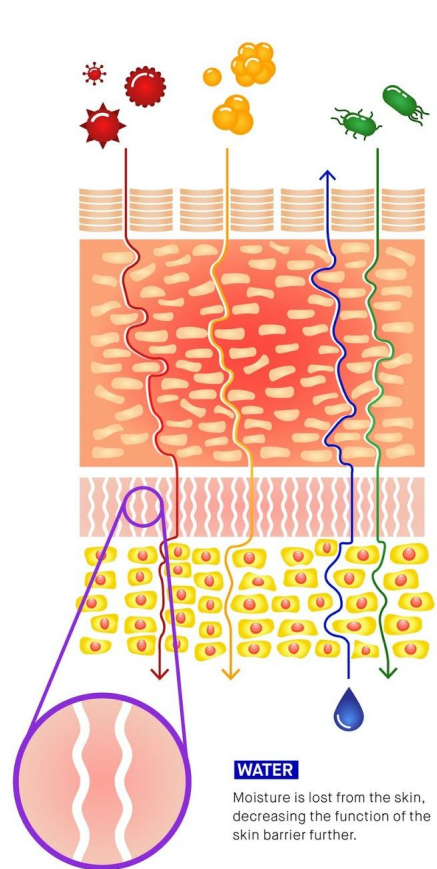
### Functioning/

Penetration of viruses, toxins and bacteria is blocked by the natural healthy skin barrier



### Non functioning/

Viruses, toxins and bacteria can penetrate the skin barrier and affect our body

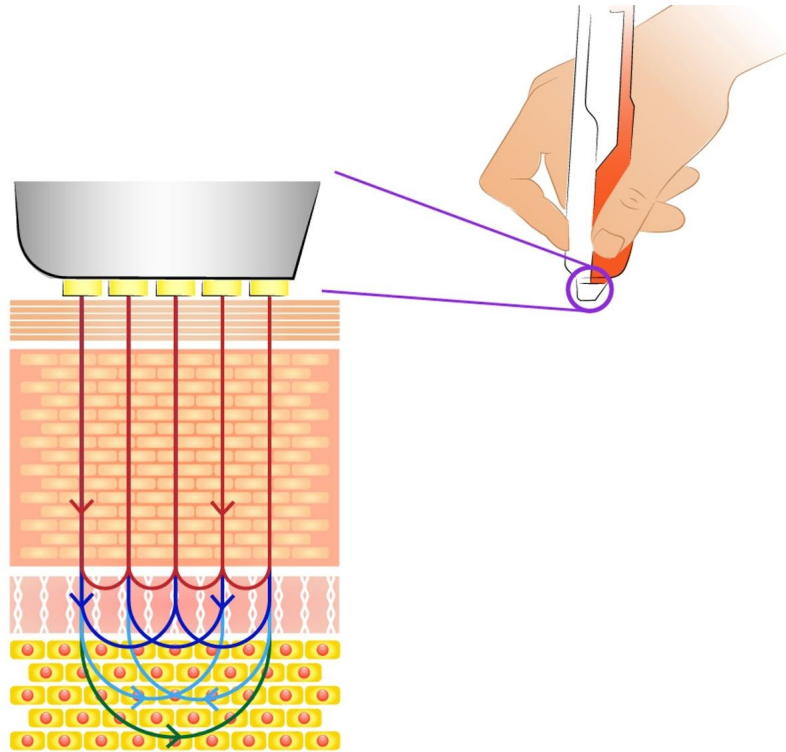


When you suffer from atopic dermatitis, your skin barrier doesn't function properly, which can allow viruses, toxins and bacteria to enter your body.



### Measuring the barrier to detect atopic dermatitis

SciBase have conducted extensive research together with Prof. Dr. Cezmi Akdis, MD from University Zurich, SIAF in Davos.



By utilizing AI and Electrical Impedance Spectroscopy (EIS), they have been able to develop methods for analyzing the state of the skin barrier.

### 03/ Helping newborn babies to healthier lives

By detecting which children have a compromised skin barrier at birth, there is a potential to identify those with a higher risk of developing eczema, allergies, or asthma. Then those children could be managed differently. Through preventive healthcare the risk could be reduced of children developing these conditions that severely affect their lives — and also become a huge burden to the healthcare system.

