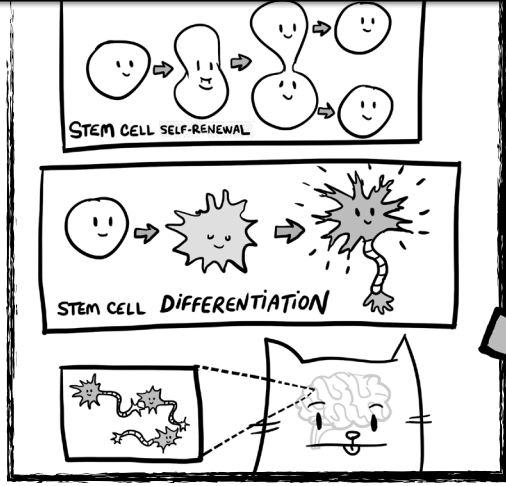


The Elixir of Life and Our Skin

1 In our bodies, we have a type of cells called stem cells that are special because: 1) they can self-renew (make more stem cells) and 2) they can change into other different types of cells. Only stem cells have these abilities. This is key for living creatures to grow from single cells.

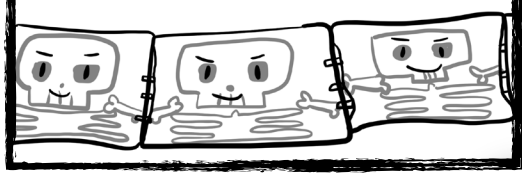


2

There are stem cells within our skin which help replace dying cells and repair wounds. They divide and then become all the different types of skin cells needed to form our skin.

3

Our skin is resistant to outside forces thanks to a network built by these chain-like structures (kind of like a skeleton) called keratins. There are patients with skin diseases that are caused by weak keratins.



4

Professor Elaine Fuchs has investigated skin diseases -and other diseases- by trying to learn everything about stem cells.

5

For example, she studied how stem cells experience cycles of rest and action: sometimes they sleep, sometimes they work to make new cells. One time they become active is when they repair wounds.

6

Stem cells have helped us regenerate parts of our bodies, for example treating burn patients. Understanding more of them could help us regenerate other parts of our bodies and give us tools to fight several diseases.