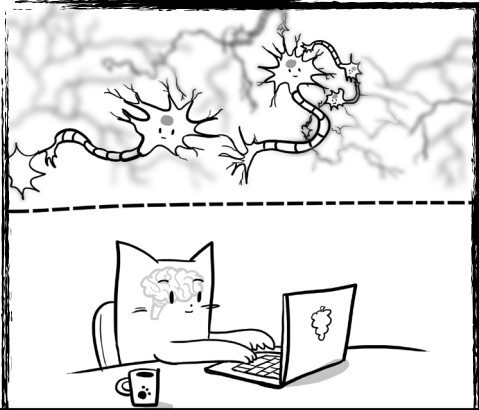


# From Genes in the Brain to Medicine

1



The brain is the control centre of the mind and body. The cells in our brain work together to help us do important tasks like move, see, think, and form memories.

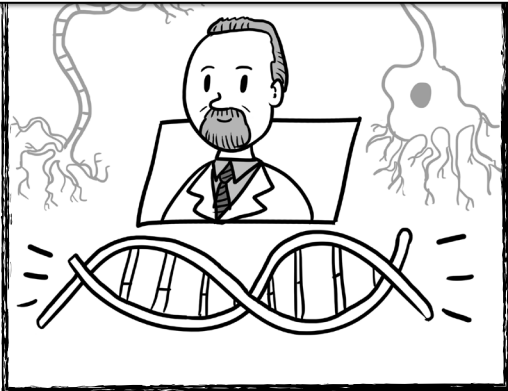
2

If some of the cells in the brain stop working properly, it can lead to brain disorders such as Alzheimer's disease, depression, or amyotrophic lateral sclerosis (ALS). ALS is a disease where the brain loses its ability to communicate with the muscles of the body, resulting in paralysis.

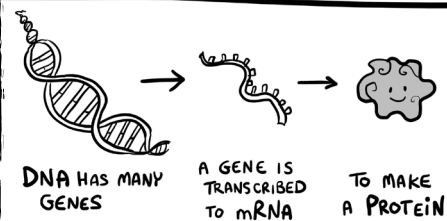
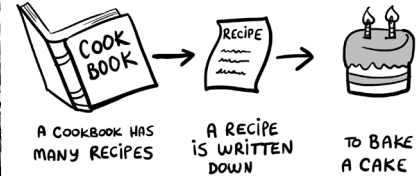


3

Dr. Guy Rouleau is a scientist and doctor who studies brain diseases like ALS. To figure out what is causing a disease, Rouleau and his team look at the building blocks of biology - genes.



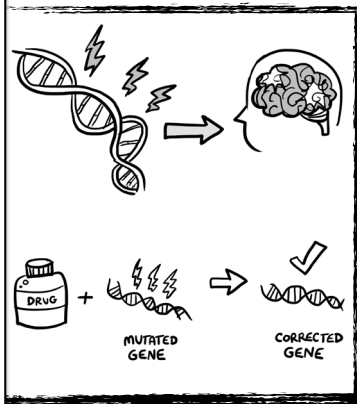
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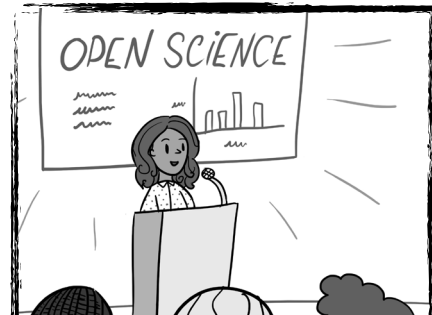
Genes are like biological instruction manuals that tell our cells what to look like and how to function. If a gene becomes mutated, it can cause cells to malfunction and lead to disease.

5

Rouleau has helped identify dozens of genes that cause different brain diseases. Once a gene is identified, treatments can be designed to target the troublesome gene and fix the effects of the mutation. Thanks to Rouleau's work, a drug is now underway to help people with ALS.



6



Rouleau is also a big advocate for open science, which is a way of doing science that promotes collaboration and sharing resources between scientists. It is only by working together that scientists can ensure more success stories for brain disease.