

# My Box Of STEAM Technology\_FUN DNA

ROSALIND ELSIE FRANKLIN\_Biophysics



Co-funded by  
the European Union

MY BOX OF STEAM (project nr. 2022-2-EE01-KA220-SCH-000099273) is funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Education and Culture Executive Agency (EACEA). Neither the European Union nor EACEA can be held responsible for them.

Technology\_FUN DNA" All content is licensed under CC BY-NC-ND 4.0.



# Rosalind Elsie Franklin Biophysics

London, Notting Hill, 25 July 1920\_ London, 16 April 1958

## THE WOMAN WHO DISCOVERED THE STRUCTURE OF LIFE

Rosalind had always imagined a life for herself that was different from the one her father wanted for her: because she was a girl, Mr Ellis Arthur imagined her as a mother, dressed in fluffy dresses and wearing pearl necklaces, moving with graceful steps, holding conversations while sipping aromatic teas. He did not believe she should pursue scientific studies, but Rosalind was determined and, with grace and talent, followed her goals. A lecture by Albert Einstein had inspired her, so at only eighteen, she passed the tests and enrolled at Cambridge University, one of the most prestigious centres for scientific studies, where she graduated in 1941. The scientific environment was very male-dominated, and Rosalind struggled to fit in, but she was not discouraged and was always ready to take on new challenges. A few years later, she decided to go to France to study X-rays, which would be useful for her future discoveries and became an expert crystallographer. Rosalind travelled and met new people, and this made her happy.

One day, a friend, given her abilities, suggested that perhaps the time had come to return to London and put her studies into practice.

Rosalind thus entered the laboratories of King's College, where interesting research in the still-unknown but incredibly wonderful field of DNA had just begun. DNA had first been extracted in the previous century, in 1869, when Swiss physician Friedrich Miescher identified it. If the subject was among the most interesting and stimulating, the same could not be said for the working environment, which was still retrograde and male-dominated. Rosalind did not feel at ease, but despite this, the young researcher, using her experience, created a special device that was able to photograph the DNA and thus see its helical shape winding around itself in a harmonious, almost musical way.

The images (that photo is now known as Photograph 51), were truly extraordinary, and Rosalind couldn't stop looking at them; she gazed at them enchanted, her eyes shining as if she were looking at a colourful expanse of flowers or the sea at sunset, even more so: it seemed to her that she was looking at the secret of life itself.

She felt happy and proud; it was her perfect moment. To the photos, she added other materials and reflections, which, with the help of a student, she was collecting so that she could publish them and thus show the world the results she had achieved. Results not only for herself but for the whole of humanity.

However, some colleagues, without asking her permission, took pictures of her and also her writings and used them to prove their deductions and beat her to the punch... That stolen discovery led them ten years later (by which time Rosalind was dead) to even win the Nobel Prize for medicine.

They never cited her or acknowledged her valuable contribution.

Rosalind, after the publication of her colleagues, disappointed and deceived, had left King's College without giving up her work as a researcher, concentrating on the study of viruses, contributing once again, in a decisive way.

