DNA is present in all living cells. It carries the organism’s hereditary information, the «secret of life». It is made up of two complementary strands formed by two regular sequences of small molecules, wound into a double helix. They can thus be duplicated identically, characterising the entire genetic make-up. It was Rosalind Franklin’s image of a pseudo-crystal made of DNA fibres, obtained in 1951 by X-ray diffraction, which enabled the structure of the molecule to be determined.

First image obtained by diffraction on DNA fibers

To understand the structure of DNA Rosalind Franklin produced a kind of one-dimensional crystal aligning long fibres of DNA molecules. With this bundle-shape crystal she obtained X-ray diffraction patterns of exceptional quality. Wilkins shows these photographs to Watson and Crick. They went on to assemble the pieces of the molecular puzzle, finding by trial and error the structure of the double helix DNA. Crick, Watson and Wilkins received the Nobel Prize for Medicine in 1962. Rosalind Franklin died in 1958 at the age of 38; she never received a Nobel, as the prize is reserved for living scientists.