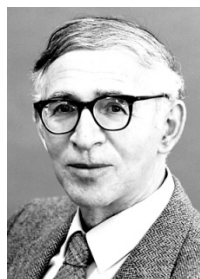


Microscope Unit

Jewish Scientist Bio Bib #1: Sir Aaron Klug



Aaron Klug

Born: 11 August 1926, Zelas, Lithuania

Prize motivation: for his development of crystallographic electron microscopy and his structural elucidation* of biologically important nucleic acid-protein complexes.

Field: biochemistry, structural chemistry

Work

One important tool in the mapping of biologically important substances is **x-ray crystallography**, in which x-rays create **diffraction**** patterns that allow scientists to determine their structures. In **electron microscopy**, beams of electrons create images of microscopic phenomena. During the 1960s, Sir **Aaron Klug painstakingly combined methods from x-ray crystallography with electron microscopy** in order to develop **crystallographic electron microscopy**. This new form of microscopy projects 3-D structural information from 2-D electron micrographs. In this way, Klug and others were able to reveal the structures of complex biological materials not viewable using conventional X-ray crystallography alone, such as **DNA and proteins in organisms, including various viruses and in chromatin**, which forms the chromosomes inside cell nuclei. For this work, he received the Nobel Prize in Chemistry in 1982.

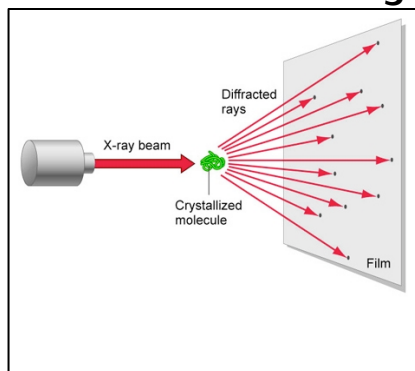
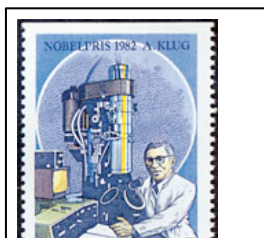
****Diffraction**- the process by which a beam of light or other system of waves is spread out as a result of passing through a narrow opening or across an

Life and Jewish Identity

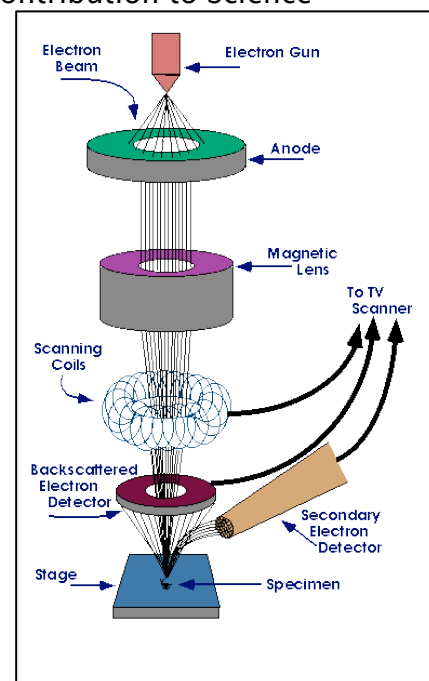
Klug was born in Želva to Jewish parents Lazar, a cattleman, and Bella (née Silin) Klug with whom he moved to South Africa at the age of two. Klug married Liebe Bobrow in 1948. **Though Klug had faced discrimination in South Africa, he remained religious and has become more religious in his older age.**

Source: https://www.nobelprize.org/nobel_prizes/chemistry/laureates/1982/klug-facts.html

https://en.wikipedia.org/wiki/Aaron_Klug <http://www2.mrc-lmb.cam.ac.uk/group-leaders/aaron-klug/>



+



***Elucidation**- shedding light on, bringing into clear view

