

Today in History

10 December



Rutherford wins Nobel Prize in Chemistry

Ernest Rutherford's discoveries about the nature of atoms shaped modern science and paved the way for nuclear physics. Einstein referred to him as a 'second Newton' who had 'tunneled into the very material of God'.

Born in 1871 near Nelson, Rutherford began his international career when he won a scholarship to the Cavendish Laboratory of the University of Cambridge, of which he was to become Director many years later. His discovery that heavy atoms have a tendency to decay into lighter atoms heralded modern techniques of carbon dating and led to his Nobel Prize.

The second great discovery of his career was that the atom consisted of a tiny, dense nucleus surrounded by oppositely charged electrons - a model that still forms the basis of atomic theory today. Perhaps most famously, in 1917 Rutherford 'split' the atom.

Read more about Ernest Rutherford

Image: Ernest Rutherford (Timeframes)

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Ernest Rutherford stamp

Ernest Rutherford

External links

biography (DNZB)

Rutherford: scientist supreme

Ernest Rutherford (Chch City Libraries)

Ernest Rutherford



1962 Wilkins wins Nobel Prize in Physiology or Medicine

New Zealand-born Maurice Wilkins and his colleagues James Watson and Francis Crick shared the prize for their studies on the structure of deoxyribonucleic acid (DNA), the genetic molecule found in all organisms. Watson used X-rays to show the shape of the double helix.

Born in the tiny north Wairarapa settlement of Pongaroa, Wilkins moved to Birmingham, England, when he was six. He received his PhD in physics from the University of Birmingham in 1940.

During the early years of the Second World War, Wilkins focused his postgraduate research on improving the cathode-ray screens used in radar before working on the separation of isotopes in bombs. In 1943 he moved to Berkeley, California, where he worked on the Manhattan Project. which helped to develop the first atomic bomb. Wilkins later confessed to feeling 'very disgusted with the dropping of two bombs on civilian centres in Japan'. Disillusioned by nuclear physics and its military applications, he would become involved in the Campaign for Nuclear Disarmament.

In 1946 Wilkins moved into the relatively new field of biophysics. He became a member of the Medical Research Council (MRC) at King's College in London, working on the genetic effects of ultrasound used for medical purposes. He then turned his attention to the use of X-ray diffraction to probe the structure of DNA. The patterns formed by the scattered X-rays showed that the DNA molecule appeared to have a double spiral structure.

Watson and Crick were able to build on the work of Wilkins and the British physical chemist Rosalind Franklin to deduce the structure of the DNA molecule in 1953. The discovery of the structure of DNA set the stage for rapid advances in molecular biology over the next 50 years. In the decade that followed Wilkins published a number of papers verifying the Watson-Crick Model, culminating in the award of the Nobel Prize in 1962.

Maurice Wilkins died in 2004.

Image: Maurice Wilkins c1999 (RSNZ)

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1962 - key events

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Maurice Wilkins (RSNZ)

Maurice Wilkins (Wikipedia)

Maurice Wilkins (Nobel Prize) Maurice Wilkins: DNA enabler (The NZ Edge)

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Ernest Rutherford stamp

Ernest Rutherford

External links

Rutherford: scientist supreme Rutherford biography (DNZB)

Ernest Rutherford (Chch City Libraries)

Ernest

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1962 - key events

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Maurice Wilkins (Nobel Prize)

Maurice Wilkins (RSNZ)

Maurice Wilkins

Maurice Wilkins: DNA enabler (The NZ Edge) (Wikipedia)

This Week in History



Troop ship Wahine wrecked en route to Korean

War



16 August 1944 CORSO formed



NZ Company ship Tory arrives



19 August 1944 20-year old Kiwi pilot's hanged for sacrifice saves French village murder



20 August 1940 Turakina sunk by German raider in Tasman



Auckland pedestrians begin 'Barnes Dance'

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Paul Reeves

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