



The Royal College of Pathologists

Pathology: the science behind the cure

Object 23: ABO blood types



What is it?

The discovery of ABO blood types made safe blood transfusion a possibility and was a breakthrough in the understanding of inherited characteristics.

History

Blood transfusion has been practised for hundreds of years but it is only since the mid twentieth century that it has been safe; before that many transfusion recipients died. The reason for this was not understood until the ABO system of blood types was discovered by the Austrian physician Karl Landsteiner in Vienna in 1900. The first successful blood transfusion based on Landsteiner's discovery was performed in 1907.

Pathology

Landsteiner performed experiments on samples of blood from colleagues in his lab, mixing cells and serum from different people. He found that serum samples from some people agglutinated the red blood cells of others. From this he identified three blood types, A, B and O. Type AB was discovered the following year. Landsteiner received the Nobel Prize in 1930 for this discovery.

As well as allowing safe transfusions, the discovery of the ABO blood types was also an important discovery in genetics, as it was one of the first characteristics that could be demonstrated to be inherited.

Find out more

[NHS Blood and Transplant](#) makes sure that safe blood transfusions are available when they're required.