

Potted history of Michael Abercrombie, one of the pioneers in the study of cell migration



Michael Abercrombie was encouraged to study biology following an article in the Times Newspaper, written by Julian Huxley, which said that 'Biology was a very good thing'. He was awarded the top Hastings Fellowship to study at Queen's College, Oxford. Unfortunately he became ill with Hodgkin's disease and had to undergo deep X-ray therapy, before he could finally take up his place at Oxford in 1931. He was awarded a first in 1934 and decided to work in the area of experimental embryology and began his career with Chris Waddington at the Strangeways Laboratories in Cambridge (Directed by Honor Fell). In 1940 he moved to the Medical School in Birmingham.

However, the lab only had a bench and a sink. Abercrombie decided to cash in his pension contributions, and his wife sold her car, enabling him to buy the bare essentials for equipping a lab. He began to work on the analysis of Schwann cell behaviour in tissue culture emigrating from pieces of severed peripheral nerve. He found that Schwann cells ceased to migrate after they had contacted each other (contact inhibition), which explained the reduced activity of Schwann cells in vivo after reuniting the stumps of a severed nerve. But he also realised that this had wider implications in control of morphogenetic processes such as wound healing, and embryonic cell migration. He went on to study contact inhibition with Joan Heaysman at University College London, and suggested in a paper to Nature in 1954, that this phenomenon could play a part in keeping fibroblasts immobilised in organisms under normal conditions. From their observations on in sarcoma cells, they suggested that all malignant cells are characterised by a reduction or absence of contact inhibition. He was elected into the Fellowship of the Royal Society in 1958. In 1970, he moved back to the Strangeways Laboratory in Cambridge, this time as the Director. Subsequently, with Sue Pegrum and Joan Heaysman, their observations on 'the locomotion of fibroblasts in culture' led to the new idea that 'a cell extends itself over the substratum by means of the assembly of new surface at its leading edge' and 'that the body of the cell is drawn up to the new adhesions by the system of contractile filaments'. (phenomenon of protrusion & contraction). He is also known for producing a series of volumes called *New Biology*, the glossary of which because the Penguin Dictionary of Biology. He died on the 28 May 1979

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