

Topic Page: [Weismann, August, 1834-1914](#)

Summary Article: **Weismann, August Friedrich Leopold**

From *The Hutchinson Unabridged Encyclopedia with Atlas and Weather Guide*

German biologist, one of the founders of genetics. He postulated that every living organism contains a special hereditary substance, the 'germ plasm', and in 1892 he proposed that changes to the body do not in turn cause an alteration of the genetic material.

This 'central dogma' of biology remains of vital importance to biologists supporting the Darwinian theory of evolution. If the genetic material can be altered only by chance mutation and recombination, then the Lamarckian view that acquired bodily changes can subsequently be inherited becomes obsolete.

Weismann was born in Frankfurt-am-Main and studied medicine at Göttingen. From 1863 he taught at Freiburg; persuading the university to build a zoological institute and museum, he became its director. Failing eyesight forced him to turn from microscopy to theoretical work in the 1860s.

Weismann realized that the germ plasm controls the development of every part of the organism and is transmitted from one generation to the next in an unbroken line of descent. Since repeated mixing of the germ plasm at fertilization would lead to a progressive increase in the amount of hereditary material, he predicted that there must be a type of nuclear division.

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