**Germ-plasm theory of Weismann**

August Weismann (1834-1914) was a neo-Darwinian biologist who proposed the germplasm theory in his book *Das Keimplasma*. It states that multicellular organisms contain **germ cells**. These cells provide heritable information that can be transmittable information. **Somatic cells** would then carry out the daily functions of the body. In germ plasm theory, only the places where heritable information needs to be transmitted would contain germ cells. This would mean the reproductive system in humans. Genetic information cannot pass from soma to germ plasm and on to the next generation. This is referred to as the [**Weismann barrier**](http://en.wikipedia.org/wiki/Weismann_barrier). **This idea, if true, rules out the inheritance of acquired characteristics as proposed by** [**Jean-Baptiste Lamarck**](http://en.wikipedia.org/wiki/Jean-Baptiste_Lamarck)**.**

Weismann said that variations are of two types. **Some are congenital i.e., organisms are born with them**. Others are acquired during the life time of a particular plant or animal. It was with this latter type of variations, the acquired characters, that Weismann was very much concerned. **He gradually developed his Theory of Germplasm to explain that acquired characters could not be inherited**. He contradicted Lamarkism with the experiment of cutting the tail of rats for several generations, yet rats were born with tails.

The germ plasm theory was essentially an early attempt to explain genetics. Once the science of modern genetics developed, it was proven through somatic cell nuclear transfer that adult cells retain a complete set of information. This countered the germ plasm theory, which states that genetic information experienced a gradual loss over time.