

Curly-eared cat essay examples

[Science](#), [Genetics](#)



Describe a test to determine whether the gene is dominant or recessive.

Gregory Mendel is well known scientist who discovered existing patterns in traits inheritance passed from an organism to its offspring. Gregory's findings led to the establishment of Mendel laws. These laws include; the law of dominance, isolation and Independent assortment. In the case of Curly-eared Cat, mutant gene can either be recessive or dominant. For instance, if a person owns a curled cat and wants to establish if the gene is dominant or recessive, then the following steps can be adopted.

First, begin the test by taking the cat to mate with a wild type with a true breeding recessive. A person can thus conclude that the curled cat gene is dominant if there is fifty percent curled kittens and the remaining fifty percent to be non- curled. On the other hand, the kittens will be 100% wild type if the cat is recessive. All the offspring will therefore be carriers.

Wild type female cat breed with curled male cat and all female offspring will be curled if dominance is the case. This is because the female offspring will have acquired the 1 X chromosome from the male cat. It is the 1 X chromosome that determines the phenotype of the offspring.

Inbreeding, the trait with offspring from two individual curled cats will determine if the gene is a true breeding cat. When 100% of offspring are curled, then their parents are homozygous recessive individuals. If the offspring bear a recessive phenotype, then tested parent is not homozygous. Curled ear dominant parents can be mated and offspring will be homozygous to the trait.