

Genetic inheritance

- Heredity
- Passing of traits to offspring from its parents or ancestors.
- Homologous chromosomes are present in zygote after fertilization
- Similar genes are located at the same locations
- Allele -> form of a gene
- Gregor Mendel
- Gregor Mendel - 19th Austrian Monk
- The three laws of inheritance
- Independent assortment
- Segregation
- Dominance
- Dominant and recessive alleles
- There is always a dominant and a recessive allele for every single characteristic
- Dominant -> capital letter
- Recessive -> small letter
- The dominant allele determines the organism's appearance
- Example -> brown and blue eyes
- Parents give one allele to the offspring, mm,
- It is all about probabilities
- Punnett square
- Genotype versus phenotype
- Homozygous versus heterozygous
- Karyotype
- Number and appearance of chromosomes in the nucleus
- 46 chromosomes in 23 pairs
- 44 autosomal chromosomes
- 2 sexual chromosomes
- xx or xy
- The father determines the gender of the child.
- Autosomal chromosomes -> normal traits
- One allele from both father and mother
- Sex chromosomes -> sex-linked traits
- Gene is local

Autosomal recessive