

## **ALL Genetics Terms to know (in alphabetical order)**

Affected (diseased)  
Allele  
Autosomal dominant  
Autosomal recessive  
Autosome  
Breeding  
Carrier  
Cell cycle  
Centromere  
Centrosome  
Chiasmata  
Chromatid  
Chromosome  
cM (centimorgans)  
Co-dominance  
Consanguinous mating (inbreeding)  
Cross  
Crossing over  
Cytokinesis  
Dihybrid cross  
Diploid  
Dominant  
F1 generation  
F2 generation  
Gamete  
Gene  
Gene mapping  
Genetic distance  
Genetic map  
Genome  
Genotype  
Haploid  
Heterozygote  
Heterozygous  
Heterozygous carrier advantage  
Homolog  
Hemizygous  
Heterozygote  
Homozygous  
Hybrid

Inbreeding  
Incomplete dominance  
Kinetochore  
Linkage  
Linkage group  
linked genes  
Locus  
Map unit (m.u.) (same as cM)  
Meiosis (I & II: Interphase, Prophase I/II, Prometaphase I/II, Metaphase I/II, Anaphase I/II, Telophase I/II)  
Meiotic non-disjunction  
Mendel's 1<sup>st</sup> law  
Mendel's 2nd law  
Metaphase plate  
Mitosis: Interphase, Prophase, Prometaphase, Metaphase, Anaphase, Telophase  
Mitotic spindle  
Modes of Inheritance  
Monohybrid cross  
Mutant  
Mutation  
Non-parental phenotype  
Non-paternity/non-maternity  
P generation (parental)  
Parental phenotype  
Pedigree  
Penetrance  
Phenotype  
Polygenic trait  
Punnett Square  
Physical distance  
Recessive  
Recombinants  
Recombination  
Recombination frequency  
Self-fertilization ("selfing")  
Sex chromosome  
Sex linked trait  
Test cross  
Trait  
Trisomy/Monosomy  
Wild type  
X-linked (dominant/recessive)  
Y-linked (dominant/recessive)

## Recombinant DNA Terms to Know

Agarose Gel Electrophoresis

Anneal

Bacterial colony

Blunt ends

cDNA

Clonal

Cloning

Cloning site

DNA amplification

DNA fragment

DNA ligase

DNA polymerase (Taq)

DNA sequencing: dideoxy chain termination – end label and fluorescent dideoxy methods

Drug resistance (e.g. Amp)

EcoRI recognition sequence

Gene targeting

Gene therapy

Genetic Engineering

Genetically engineered animal models

Genotyping

Haplotype

Host

Hybridization

Knock-out mice

Library (cDNA, genomic)

Ligation

mRNA

Multiple cloning site

Oligonucleotide probe/primer

Oncogene

Origin of Replication (ORI)

Palindrome

Plasmid

Polymerase Chain Reaction (PCR)

Polymorphisms (RFLP)

Precursor RNA

Promoter

Recombinant DNA revolution

Reporter gene

Restriction enzyme

Restriction map  
Retroviral vector  
Reverse Transcriptase (RT)  
Selectable marker  
Selection  
Short Tandem Repeat (STR)  
SNP (Single nucleotide polymorphism)  
Splicing  
Sticky ends  
Tissue specific promoter  
Transformation  
Transgene  
Transgenic  
Vector  
Virus

Systems Biology Terms to know

DNA Hybridization
DNA melting temperature
Epistasis
Expression microarray
Fluorescent protein
Genome assembly
Graph
Microarray
Model
Network model
Paired end reads
Probe
Protein – DNA interaction
Transcription factor