

Mendelian Genetic		Laws of Inheritance (cont)		Non-Mendelian Inheritance (cont)		Non-Mendelian Inheritance (cont)	
Gregor Medal - Father of Modern Genetics	Why Pea?	Hybrid offspring will only inherit the dominant trait in the phenotype.	A pair of traits segregates independently of another pair during gamete formation. As the individual heredity factors assort independently, different traits get equal opportunity to occur together.	During the production of gametes, two copies of each hereditary factor segregate so that offspring acquire one factor from each parent. In other words, allele (alternative form of the gene) pairs segregate during the formation of gamete and re-unite randomly during fertilization.	Where both the alleles are expressed equally.	The traits blend together producing an intermediate phenotype. If two flowers are crossed together, a hybrid will be produced that is in between both the parents.	e.g. Mendel's snapdragon flower color, eye color, height
Austrian monk who studied heredity in pea plants.	easy to grow and readily available	The alleles that are suppressed are called the recessive traits while the alleles that determine the trait are known as the dominant traits.			Where one trait is controlled by several genes.	Where multiple genes control a single trait. If two flowers are crossed together, a hybrid will be produced that is in between both the parents.	e.g. When a dragon has a fire-breathing trait, it is based on a single gene.
Developed laws of inheritance.	control fertilization and reproduce rapidly				Multiple alleles in a population with different frequencies. One allele may be dominant and multiple recessive alleles may be present. If two heterozygous individuals are crossed, the offspring will have a 3:1 phenotypic ratio.		
Conducted experiments on Pisum sativum (pea plants)	easily distinguishable, distinct trait						
Laws of Inheritance							
Law of Dominance	Law of Independent Assortment	Law of Segregation					
			Non-Mendelian Inheritance				
			Co-Dominance	Incomplete Dominance	Polygenic Inheritance	Multiple alleles	Pleiotropy

