

## Variation and Distribution of Genetic Traits

### I. Mendel and Inheritance Patterns

#### A. GREGOR MENDEL (1822-1884) - " \_\_\_\_\_ "

- Austrian \_\_\_\_\_, teacher, scientist, & \_\_\_\_\_
- Gathered first scientific evidence of \_\_\_\_\_ by which parents transmit \_\_\_\_\_ to offspring.
- Tracked traits in many generations of \_\_\_\_\_ and concluded that traits are expressed in units (now called \_\_\_\_\_)

#### B. Mendel's Laws of Dominance

- In pea plant experiments,  $F_1$  ( \_\_\_\_\_ ) resembled only \_\_\_\_\_ of the parents
- $F_1$  contained **genes** for each trait
- One \_\_\_\_\_; (stronger, masks recessive);
- One \_\_\_\_\_; (seems to disappear)

### II. Modern Genetic Terms

#### A. Genes

- Inherited unit of information about traits
- Each has its own \_\_\_\_\_ on the chromosome

#### B. Alleles

- \_\_\_\_\_

C. Homozygous dominant - has \_\_\_\_\_ alleles (**AA**)

D. Homozygous recessive - has \_\_\_\_\_ alleles (**aa**)

#### E. Heterozygote

- Has two \_\_\_\_\_ (**Aa**)
- Dominant allele \_\_\_\_\_ effect of the recessive allele on the homologous chromosome
- Can use term " \_\_\_\_\_ "