

BI2233 - Genetics

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Chapter 1

Introduction

Some of the principles of Genetics has been known for a very long time. Eg: If a specific feature was required from a plant/animal, one would breed only those with the features and hence obtain individuals that have the same traits Genetics as a formal topic is only about 200 years old.

Tangent 1: There are many biological phenomena that were understood using genetics. *Drosophila* was used to understand Cancer, aging, etc. The Central Dogma of Molecular Biology was mainly understood using single-celled organisms (*E. Coli*)

Tangent 2: Aging is a phenomena that is very well known. How to identify if a gene (or a set of genes) influence aging? One could start by trying to mutate certain genes and see if the lifespan of the individual changes. (Japanese have a relatively longer lifespan). The age of a person may also be affected by various environmental factors. There could also be many epigenetic factors that are not directly related to the genetic information.