

# INTRODUCTION

Molecular characters and evolutionary analysis

# Evolutionary analysis

What kind of information is sought

- Phylogeny: evolutionary branching topology as representation of common ancestry, definition of ancestral forms, retracing the evolutionary steps
- Estimations
  - Length of time in each branch
  - Degree of divergence
- Identification of new forms
- Lateral transmission



# Molecular information

What kind of information genetic analyses provide for

- Aligned sequences (nucleotides, amino acids): point mutations, rearrangements, new *loci*
  - Mutation theory, Neutral Theory
- Frequencies in polymorphic *loci*: divergence among populations as requisite for incipient speciation
  - Wright's island model and its follow-up
- Gene expression
  - Micro- and macroevolution