

Part V

11 Construction of scoring matrix

11.1 Introduction to progressive alignment

Several heuristic solutions to compute MSAs have been developed to avoid the multi-dimensional DP approach that requires heavy computational power.

Three cases of aligning multiple sequences

- Two sequences, e.g. s^1 and s^2
- One alignment and one sequence, e.g. \mathcal{A}^1 and s^1
- Two alignments, e.g. \mathcal{A}^1 and \mathcal{A}^2

Guiding methods

- Clustering
- Phylogenetic tree

Aligning methods

- Complete alignment
- Pair-guided alignment

Once a gap always a gap

Many progressive alignment procedures use the once a gap always a gap policy, hence it is difficult to fix the errors that are made in early steps.