

Overview of Computational Biology Methodologies

Introduction to Computational Biology

Computational biology involves the application of data-analytical and theoretical methods, mathematical modeling, and computational simulation techniques to the study of biological systems.

Key Methodologies

Sequence alignment, structural bioinformatics, systems biology, and molecular modeling are core methodologies.

Tools like BLAST, ClustalW, and molecular dynamics simulations are frequently used.

Case Studies and Applications

Applications include gene expression analysis, protein structure prediction, and simulation of cellular processes.