



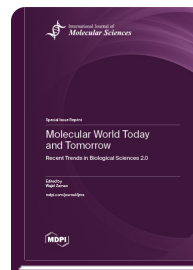
*Special Issue Reprint*

## **Molecular World Today and Tomorrow: Recent Trends in Biological Sciences 2.0**

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Various molecular techniques based on omics (transcriptomics, proteomics, and genomics) and phylogenetics have been applied in biological sciences. Molecular dynamics have become quantitative tools, allowing researchers from multiple disciplines to design different studies. Molecular-based techniques can be comprehensive and systematic, as they allow identification, resolve genetic differences, facilitate molecular docking, and create prediction models of ecological niches and taxonomic ranks. Investigating genomics, proteomics, and phylogenetic techniques requires a novel class of DNA elements, such as microsatellites from mitochondria and chloroplast and retrotransposons, resulting in genetic variations using molecular data. The advantages and limitations of molecular approaches have been well studied and acknowledged. The combination of molecular phylogenetic and omics techniques, expressions, and pathways may greatly increase our capacity to understand and develop new molecular mechanisms and stress responses in biological systems. Furthermore, these techniques offer extensive opportunities for researchers to develop targeted therapy approaches and disease diagnoses using molecular data. It is necessary to evaluate and explore how data from diverse molecular techniques can be applied to different biological studies. The study and application of molecular approaches are significant in advancing genomics, proteomics, and phylogenetic techniques in biological sciences.



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