

easy
with
recalls.
PIR,
data
three
needa-
rearing

obtain
availability
views.
availability

- 9 Composite databases make searching much simpler because information from different databases is gathered in a single database
- 10 The composite databases has its own format and different strategies are used to create them taking data from various primary resources. **ORNL, MISPX, MRDB** are examples of composite databases.
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- 12

Primary Databases :- These are the primary repositories of data used to store nucleic acid, protein sequences and structural information of biological macromolecules. **NCBI, GenBank, DDBJ, SWISS-PROT, PIR, PDB** are the names of some primary data repositories. The sequence collection in these databases is due to the efforts of basic researchers from academic, industrial and sequencing labs.

Secondary Databases :- These databases contain additional information derived from the analysis of data available in primary repositories. Secondary databases are analyzed in a variety of ways and contain different information in different formats. One of the major primary database, **SWISS-PROT**, is used to derive several other secondary databases. **TrEMBL, Pfam, PROSITE, Profiles, SCOP, CATH** are some examples of secondary databases.

Composite Databases :- A composite database combines information from various primary databases and makes it convenient to search the desired information without querying to all these primary databases.

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WEDNESDAY

December '21

Week-49 (335-030)

Biological Database

Databases are convenient system to properly store, search and retrieve any type of data. A database help to easily handle and share large amount of data and supports large scale analysis by easy access and data updation.

The bioinformatics has become an essential part of biological research and is gradually playing an important role in the organization and analysis of genomic, transcription and proteomic data produced by conventional biological experiments as well as using high-throughput technique. Diverse types of information may be stored in biological databases viz. sequences (DNA, RNA and proteins), images of 2D gel, structures of macromolecules, organism specific information from literature.

Biological Databases can be classified into Primary, Secondary and Composite database based on information available in the databases.

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