

- **Protein**
 - **Primary structure**: amino acid sequence
 - **Secondary structure**: local folding motifs (alpha helix, beta sheet)
 - **Tertiary structure**: overall 3D shape
 - **Quaternary structure**: assembly of multiple subunits



Protein Folding

- **Protein Folding**
 - **Native state**: biologically active conformation
 - **Denaturation**: loss of structure
 - **Chaperones**: assist in folding
 - **Hydrophobic effect**: major driving force
 - **Hydrogen bonds**: stabilize secondary structure
 - **Disulfide bridges**: covalent cross-links

