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 Three-Dimensional Structure of Proteins

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|  |  |  |  |  |  |  |  |  |  | 6 |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  | 7 |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 8 |  |  |  |  |  |  |  |  |  |  | 9 |  |  |  |  |  |  |  |
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|  |  |  |  |  |  |  |  |  | 12 |  |  |  | 13 |  |  |  |  |  |  |
|  | 14 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  | 15 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| **Across****1.** Proteins that assist in the correct folding or refolding of polypeptides**3.** An arrangement of a polypeptide chain that maximizes the use of internal hydrogen bonding**6.** The arrangement of multiple segments in beta conformation**8.** Protein found in connective tissue (tendons, cartilage, etc)**9.** Proteins consisting of polypeptide chains arranged in strands or sheets**10.** The level of arrangement of protein subunits**12.** Torsional angle between the alpha carbon and nitrogen in an amino acid**13.** Protein produced by insects and spiders in the production of silk**15.** Protein essential to mammal hair, wool, claws, etc.**16.** Formation of a polypeptide requires the formation of a**17.** Main inventor of the plot used to predict dihedral phi and psi angles**18.** Protein residues that favor the middle of the protein, away from water are characterized as  | **Down****2.** Proteins consisting of polypeptide chains folded into spherical shapes**4.** Torsional angle between the alpha carbon the carboxyl carbon in an amino acid**5.** The spatial arrangement of amino acid residues**7.** The process in which the three-dimensional structure of a protein is lost**11.** The process in which a protein regains its native structure**14.** The level of arrangement of all atoms in a protein |