3.4: Quaternary Structure

Quaternary structure describes a protein composed of two or more polypeptides. Like tertiary structure, multimeric polypeptide are formed by the same kinds of non-covalent interactions and may be stabilized disulfide bonds. Specifically, a dimer contains two, a trimer three, a tetramer four polypeptides... and so on. Multimers made up of identical subunits are referred to with a prefix of "homo-" (e.g. a homotetramer). Those made up of different subunits are heteromers. The vertebrate hemoglobin molecule, consisting of two a- and two b- globins (shown below) is a heterotetramer.

[Image of hemoglobin molecule]