* Secondary structure – only about 80% of proteins are folded in regular ways – the rest are unstructured
* Fibrous proteins – special proteins that cannot be degraded by trpsins and chemotrypsin – cardilage and muscle tissues
* Globular proteins – spell up into specific shape – biological functions – tertiary structure – the biological function is connected with shapes
* Dynamic of globular protein structure – certain flexibility to bind things
* Prediction – amino acid sequence – use computer to predict 2nd and 3rd structures
* Local folding is secondary
* Naturally occurring secondary structure – right handed alpha helix, beta sheet, 310 helix – backbone held by hydrogen bond – thousand bonds in DNA – H bond on its own is weak
* Alpha sheet - Yellow lines are H bond – side chains stick out – backbone like a circle (wheel etc) – using 3D viewer can rotate proteins
* Beta - Secondary structure – backbone like a plain – sidechains going above and below plain – hydrophobic may be on a face
* Only 2 types of rotation are permitted – planarity enforces that the backbone between one and another C-alpha are all in one plane