

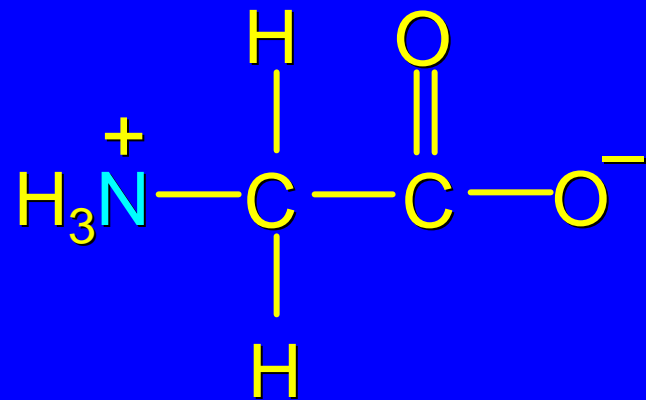
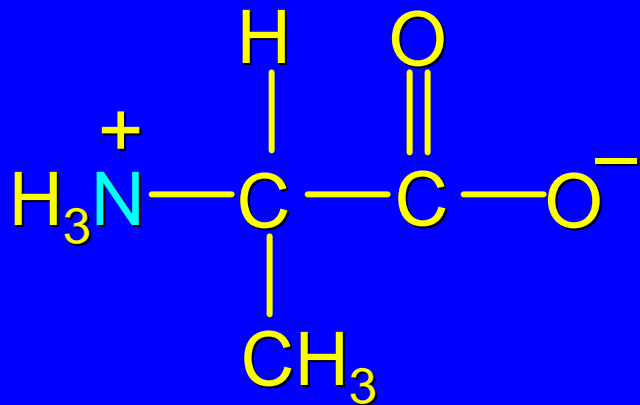
27.7
Peptides

Peptides

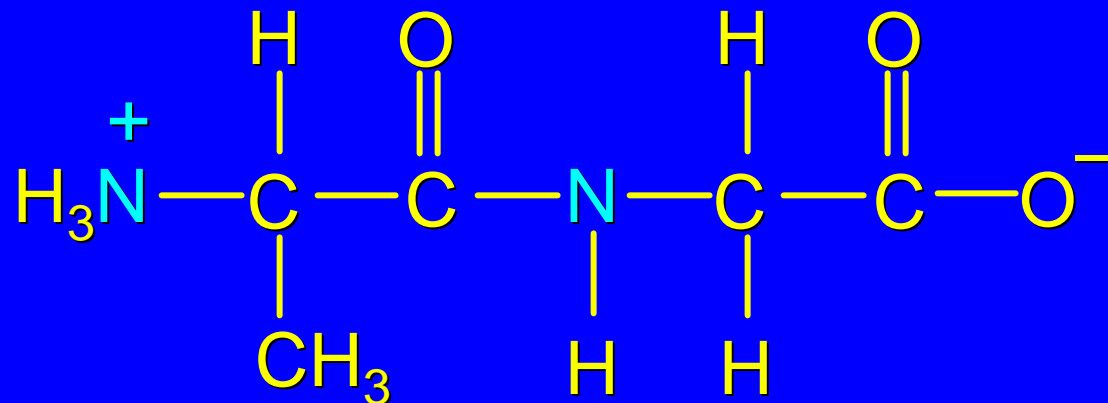
Peptides are compounds in which an amide bond links the amino group of one α -amino acid and the carboxyl group of another.

An amide bond of this type is often referred to as a peptide bond.

Alanine and Glycine

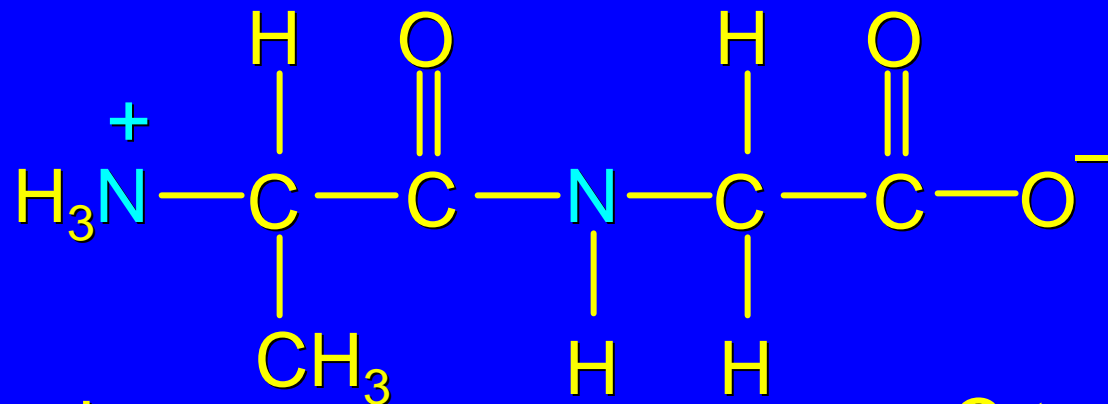


Alanylglycine



Two α -amino acids are joined by a peptide bond in alanylglycine. It is a *dipeptide*.

Alanylglycine



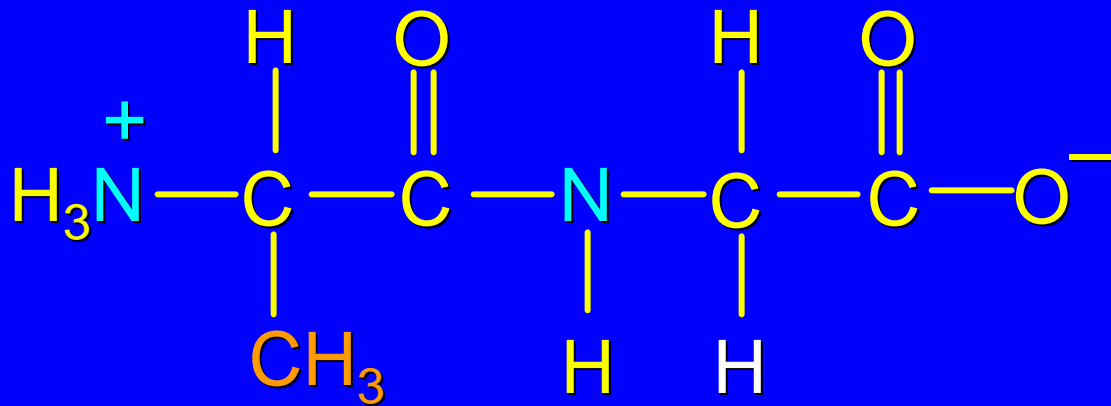
N-terminus

C-terminus

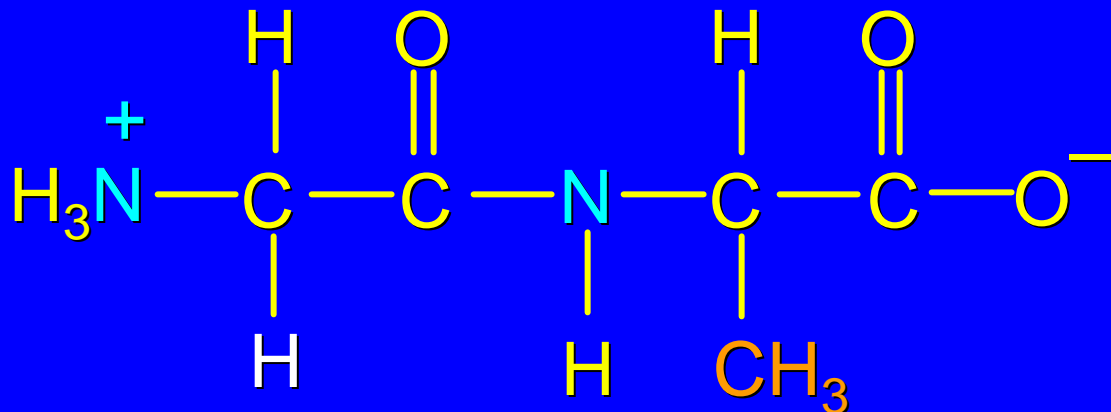
Ala—Gly

AG

Alanylglycine and glycylalanine are constitutional isomers

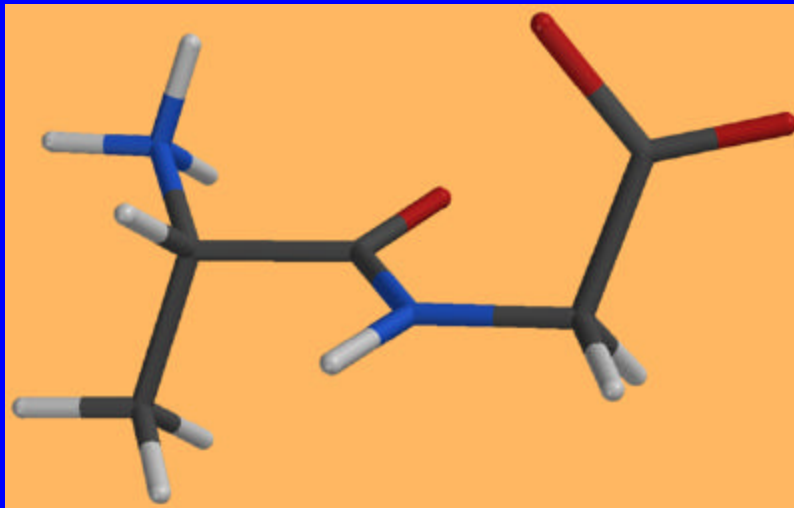
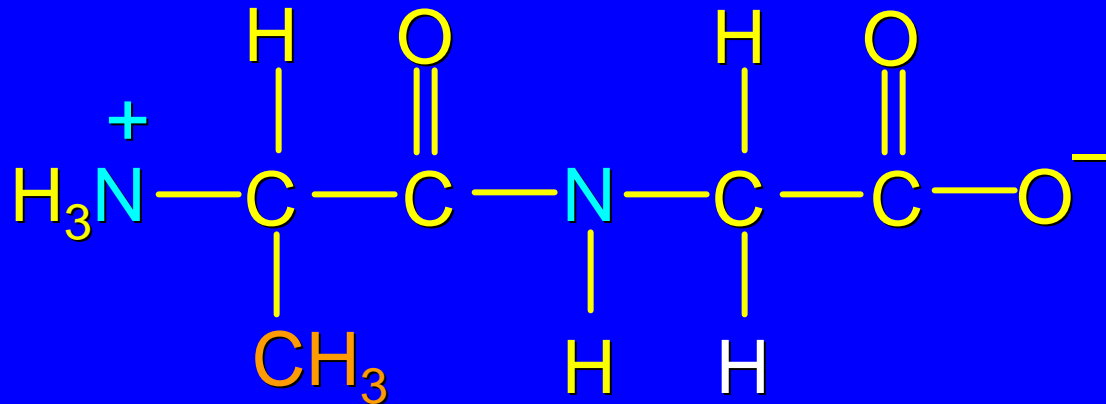


Alanylglycine
Ala—Gly
AG



Glycylalanine
Gly—Ala
GA

Alanylglycine



The peptide bond is characterized by a planar geometry.

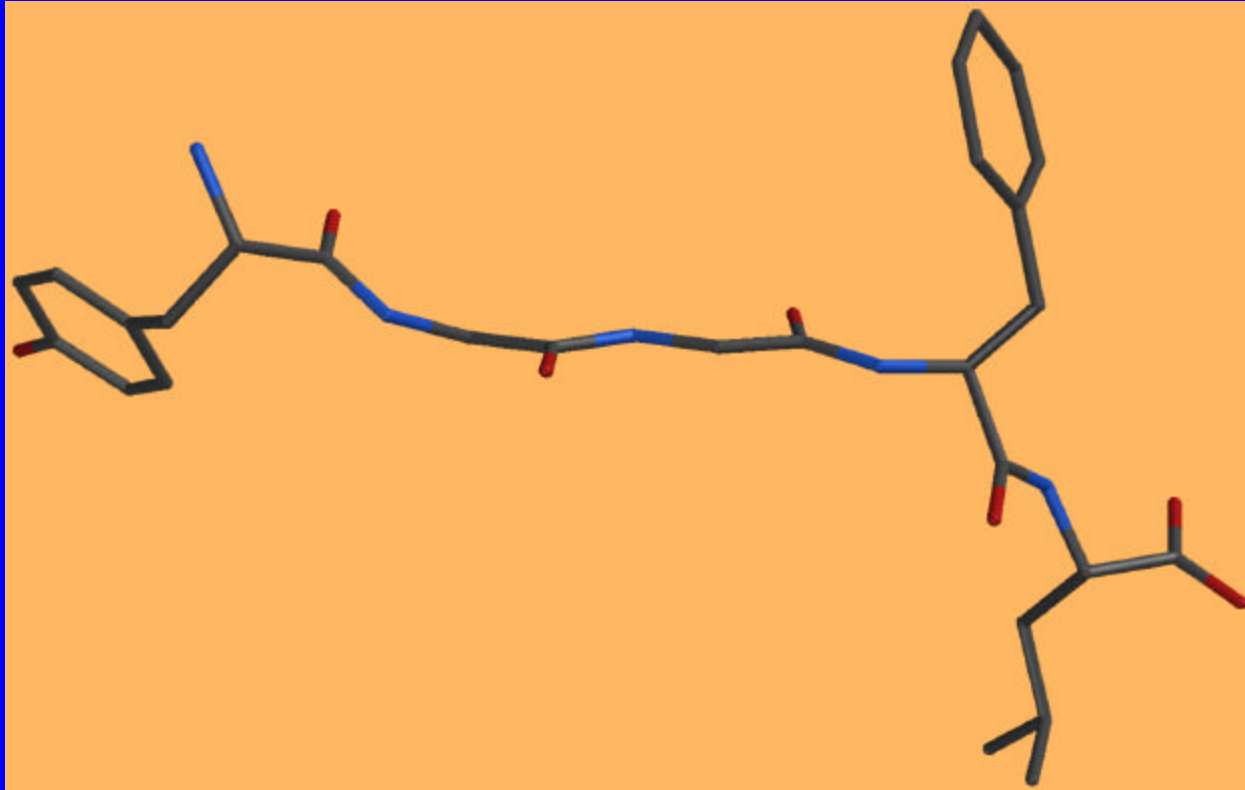
Higher Peptides

Peptides are classified according to the number of amino acids linked together.

dipeptides, tripeptides, tetrapeptides, etc.

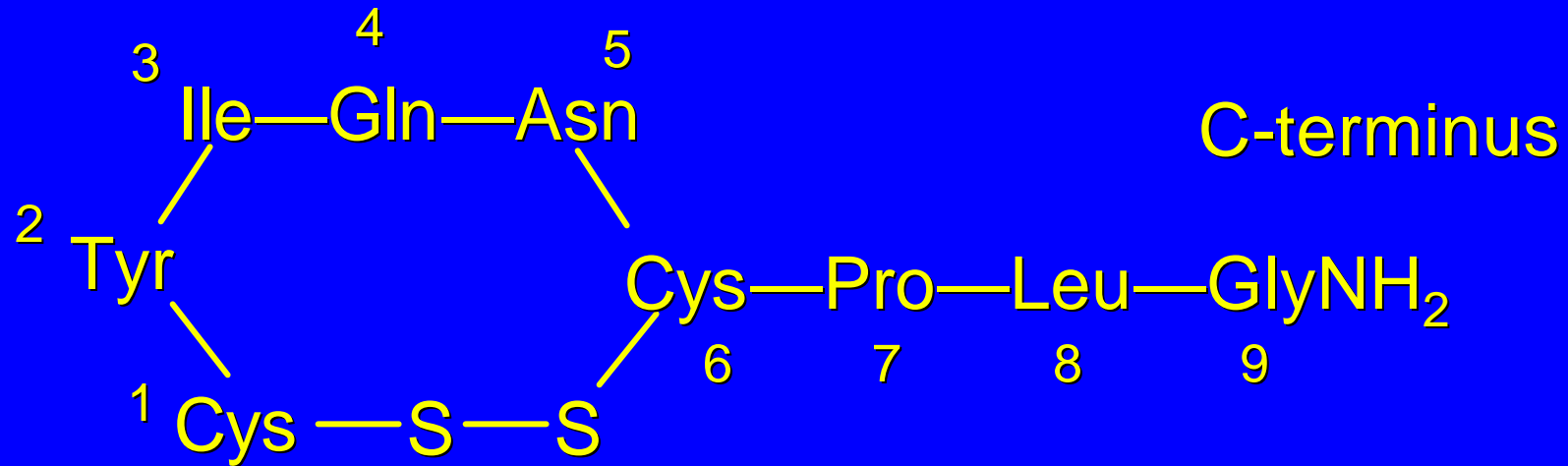
Leucine enkephalin is an example of a pentapeptide.

Leucine Enkephalin



Tyr—Gly—Gly—Phe—Leu
YGGFL

Oxytocin

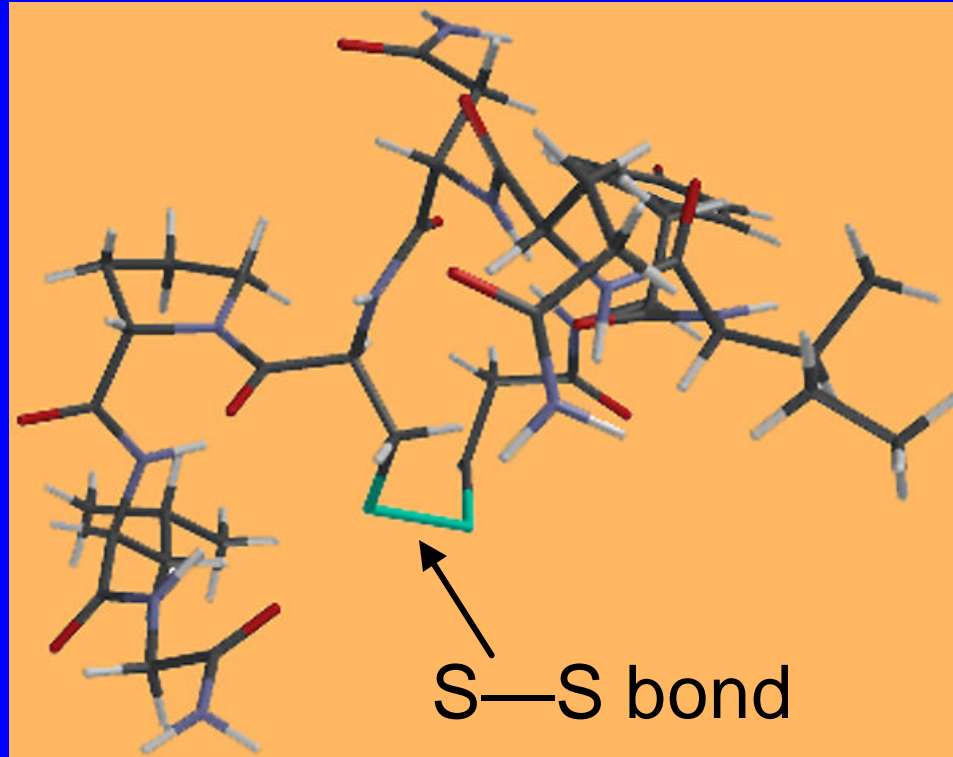


N-terminus

Oxytocin is a cyclic nonapeptide.

Instead of having its amino acids linked in an extended chain, two cysteine residues are joined by an S—S bond.

Oxytocin



An S—S bond between two cysteines is often referred to as a *disulfide bridge*.