








Functional Groups of Biological Molecules

Structure	Group name	Major molecules having the group
—O—H 	Hydroxyl	Found in carbohydrates and many other cellular compounds
$\begin{array}{c} \text{O} \\ \parallel \\ \text{—C} \\ \\ \text{H} \end{array}$ 	Aldehyde	Found in aldo- type sugars
$\begin{array}{c} \text{O} \\ \parallel \\ \text{—C} \\ / \quad \backslash \end{array}$ 	Ketone	Found in keto- type sugars
$\begin{array}{c} \text{O} \\ \parallel \\ \text{—C} \\ \\ \text{OH} \end{array}$ 	Carboxyl	Found in organic acids such as amino acids and fatty acids.
$\begin{array}{c} \text{H} \\ \\ \text{—N} \\ \\ \text{H} \end{array}$ 	Amine	Found in amino acids, proteins, and other N-containing compounds
$\begin{array}{c} \text{OH} \\ \\ \text{—O—P=O} \\ \\ \text{OH} \end{array}$ 	Phosphate	Found in nucleic acids (DNA, RNA), ADP, ATP, phospholipids
—S—H 	Sulfhydryl	Found in the amino acid cysteine and thus in most proteins.