Methylation

Process: Addition of a methyl group to specific amino acid residues, typically lysine or arginine.

Function: Plays a role in gene expression regulation, protein-protein interactions, and histone modification.

Methylation denotes the installation of a methyl group on a substrate. Usually, methylations entail the substitution of an atom or group by a methyl group. A methylation is a form of alkylation with a methyl group, rather than a larger carbon chain, replacing a hydrogen atom. These terms are commonly used in chemistry, biochemistry, soil science, and the biological sciences.

In biological systems, methylation is catalyzed by enzymes; such methylation can be involved in modification of heavy metals, regulation of gene expression, regulation of protein function, and RNA processing. Methylation of heavy metals can also occur outside biological systems. Chemical methylation of tissue samples is also one method for reducing certain histological staining artifacts. The counterpart of methylation is demethylation.

Glioma methylation

see Glioma methylation.