



Hydroxymethylation & its Role in DNA Repair Associated Disease

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ABSTRACT: Hydroxymethylation is gathering major attention by the researchers now days because of its role in variety of cancers, neurological disorders and some other type of diseases such as aging. 5hmC acts as hydroxymethylated agent and is an important epigenetic regulator. 5hmC is formed by the oxidation of 5mC in presence of enzymes which includes TET family of enzymes. 5mC is present in inter or intragenic regions of DNA while 5hmC can be found at 5'-end of DNA with level directing gene transcription. Levels of 5hmC in tissues act as identifier for related disease and their progression. Our aim is to determine the detailed information on hydroxymethylation that how its presence in DNA is going to pose the problem that is linked to the critical disorders such as cancers. Based upon our analysis on available literature and data for DNA repair systems and mechanisms we proposed a unique view of hydroxymethylation and its involvement with various DNA repair associated diseases. © 2014 iGlobal Research and Publishing Foundation. All rights reserved.

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