Effects of histone deacetylase inhibitors on anti neoplastic activity

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Histone deacetylase inhibitors are a new class of drug that interferes with the function of histone deacetylase. These drugs are being used in neurology and psychiatry as mood stabilizers and as anti-epileptics. More recently they are being investigated as possible treatments of cancer and inflammatory diseases. Histone deacetylase inhibitors affect the gene expression by hyperacetylation of histone. To carry out gene expression, a cell must control the coiling and uncoiling of DNA around histones. This is accomplished with the assistance of histone acetyl transferase which acetylates the lysine residue in core histone leading to a less compact and transcriptionally active chromatin and on the converse, the action of histone deacetylase which remove the acetyl group from the lysine residue leading to the formation of a condensed and transcriptionally silenced chromatin. Reversible modification of the terminal tails of core histones constitute the major epigenetic mechanism for remodeling higher order chromatin structure and controlling gene expression. Histone deacetylase inhibitors block this action and can result in hyperacetylation of histone thereby affecting gene expressions.

Biography
Juhi Tiwari has completed her M.Pharm in Pharmacology at the age of 24 years from Jayoti Vidyapeeth Women’s University and published a two research paper on anti-pyretic and anti-urethral effect and two review article on Autism and on anti-neoplastic agents in Pharmaceutical regulatory affairs and in World Congress on Cancer therapy and was invited as a speaker international conference 2015.

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