

## **“Epigenetic signaling mechanisms: A brief overview”**

All human cells carry the same genetic information, but still they differentiate into different tissues to carry out different functions. Hence, the genetic information must be expressed at right time and right place for the normal development of a eukaryotic organism. The regulation of gene expression in different cell types is done by various epigenetic mechanisms. The main key players of epigenetic systems include DNA methylation, post-translational modifications histone tails and non-coding RNA molecules. The expression of genes in higher eukaryotes, cellular expressional memory and some mammalian specific processes like X-chromosome inactivation and parental imprinting are under the control of epigenetic modifications. In the presentation, I will give a brief overview on the various epigenetic mechanisms.