

Microsymposium

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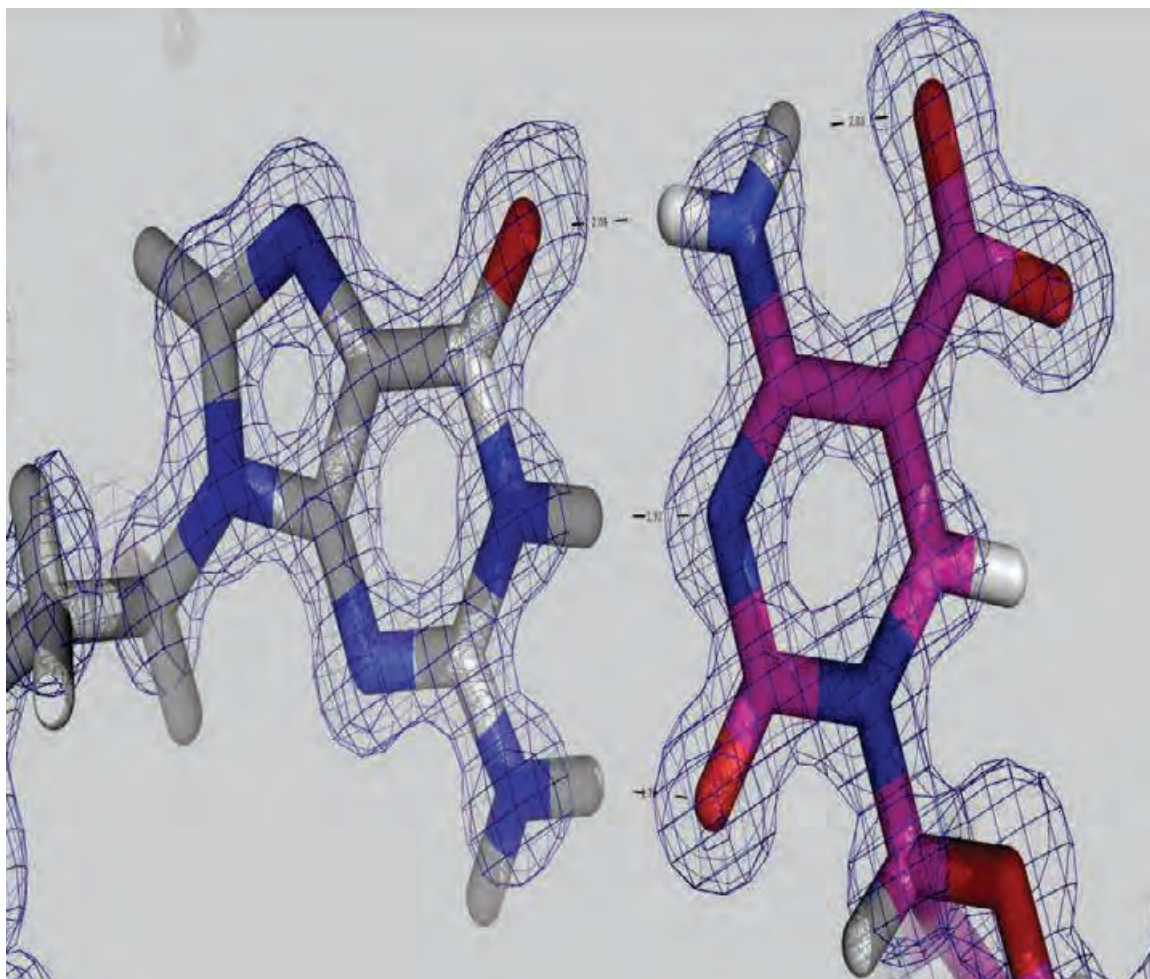
Generation, Recognition, and Erasure of 5-methylcytosine and its Oxidative Derivatives

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During the development, mammalian germ line cells and brains undergo a series of cellular and molecular events that lead to the erasure and re-establishment of epigenetic programs. It is possible that the active erasure and the re-establishment of 5-methylcytosine (5mC) marks during germ line differentiation and brain development from fetus to young adult involve dynamic changes of 5mC into oxidative marks, and that these modified cytosine residues in DNA are recognized by specific protein readers with distinct roles in the maintenance of epigenetic memory. Here we report our on-going biochemical and structural analyses of generation, recognition and erasure of these marks.

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Keywords: Epigenetics, DNA methylation, DNA 5mC oxidation