



Figure 1. Cytosine Methylation in DNA

(a) Addition of a methyl group (*red*) at the 5 position of the cytosine pyrimidine ring (*black arrow*) does not sterically interfere with GC base-pairing (*blue lines*). DNA methyltransferases associate covalently with the carbon-6 position (*green arrow*) during methyl group transfer. (b) A model of B-form DNA methylated at cytosines in two self-complementary CpG sequences. The paired methyl moieties (*magenta and yellow*) lie in the major groove of the double helix.