

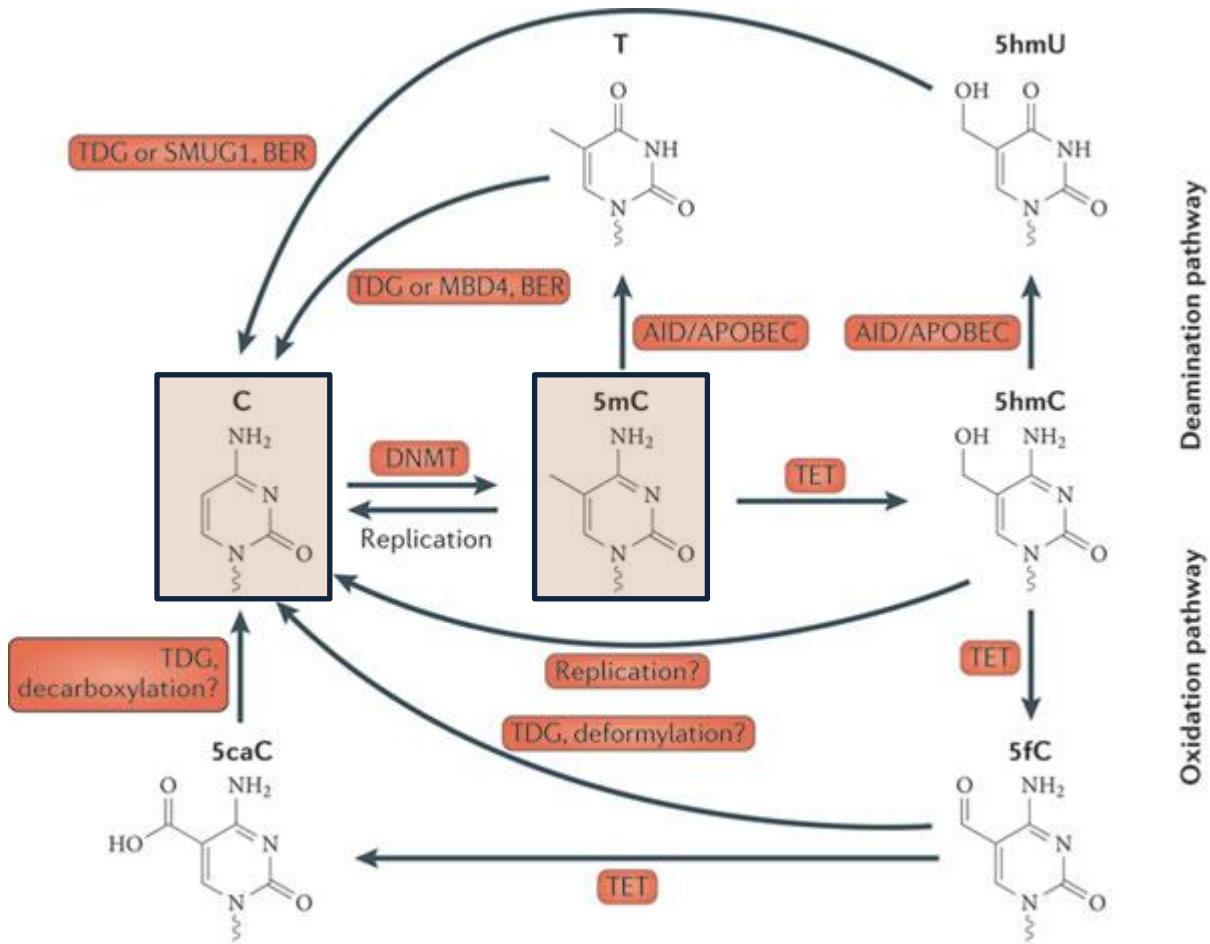
Additional Cytosine Modifications – analysing hydroxymethylcytosine (5hmC) with oxidative BS-Seq (oxBS)

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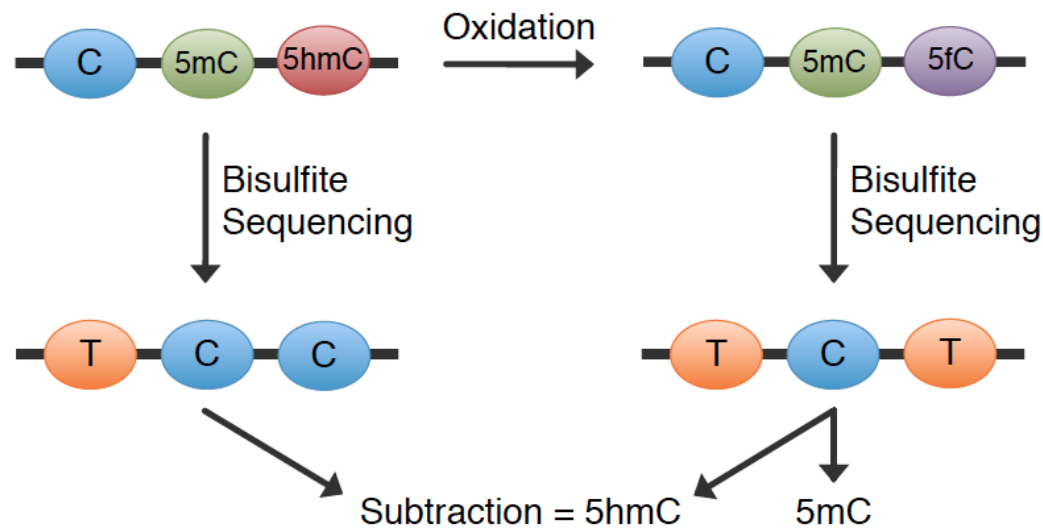
Cytosine modifications



Miguel R. Branco, Gabriella Ficz & Wolf Reik
Nature Reviews Genetics **13**, 7-13 (January 2012)

Nature Reviews | **Genetics**

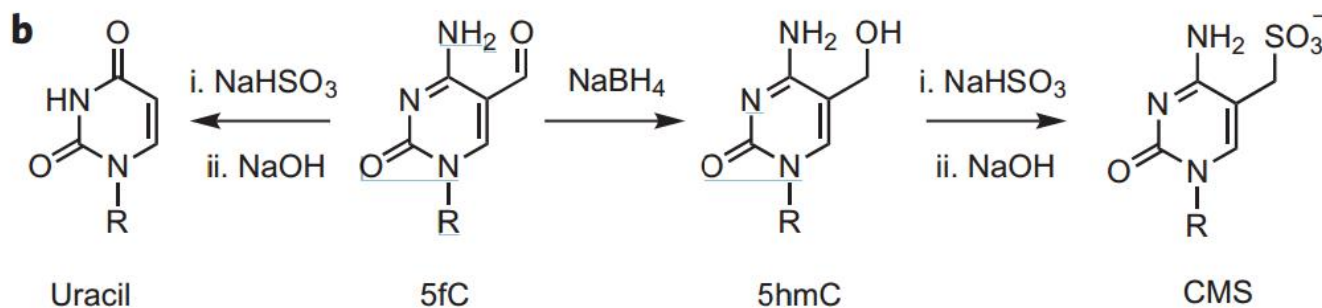
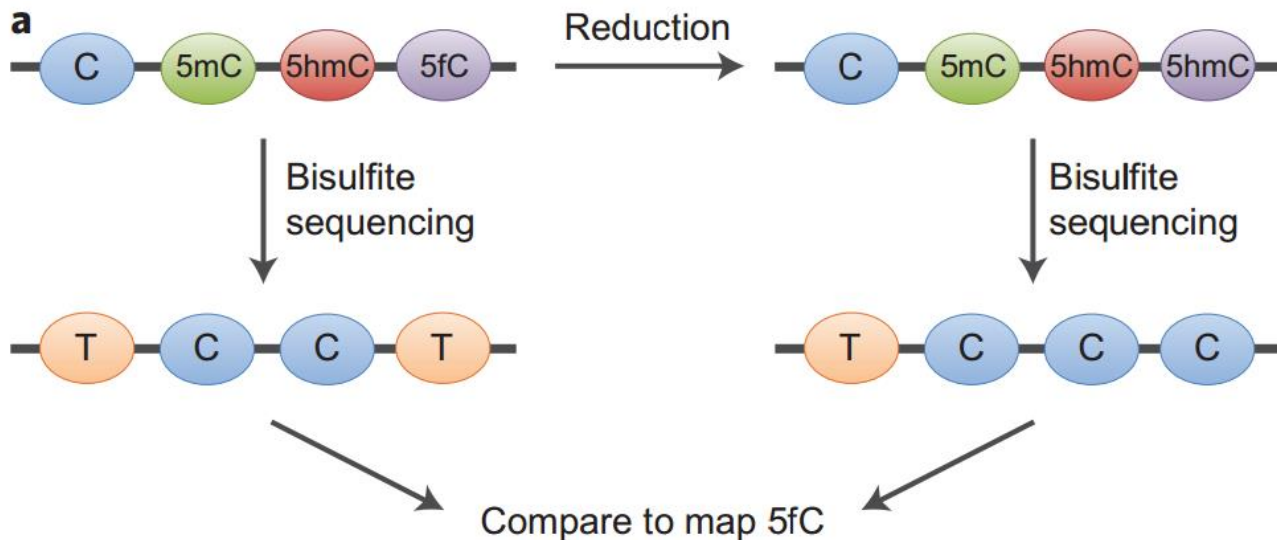
Detecting 5-hydroxymethylcytosine using Oxidative Bisulfite-Seq (oxBS)



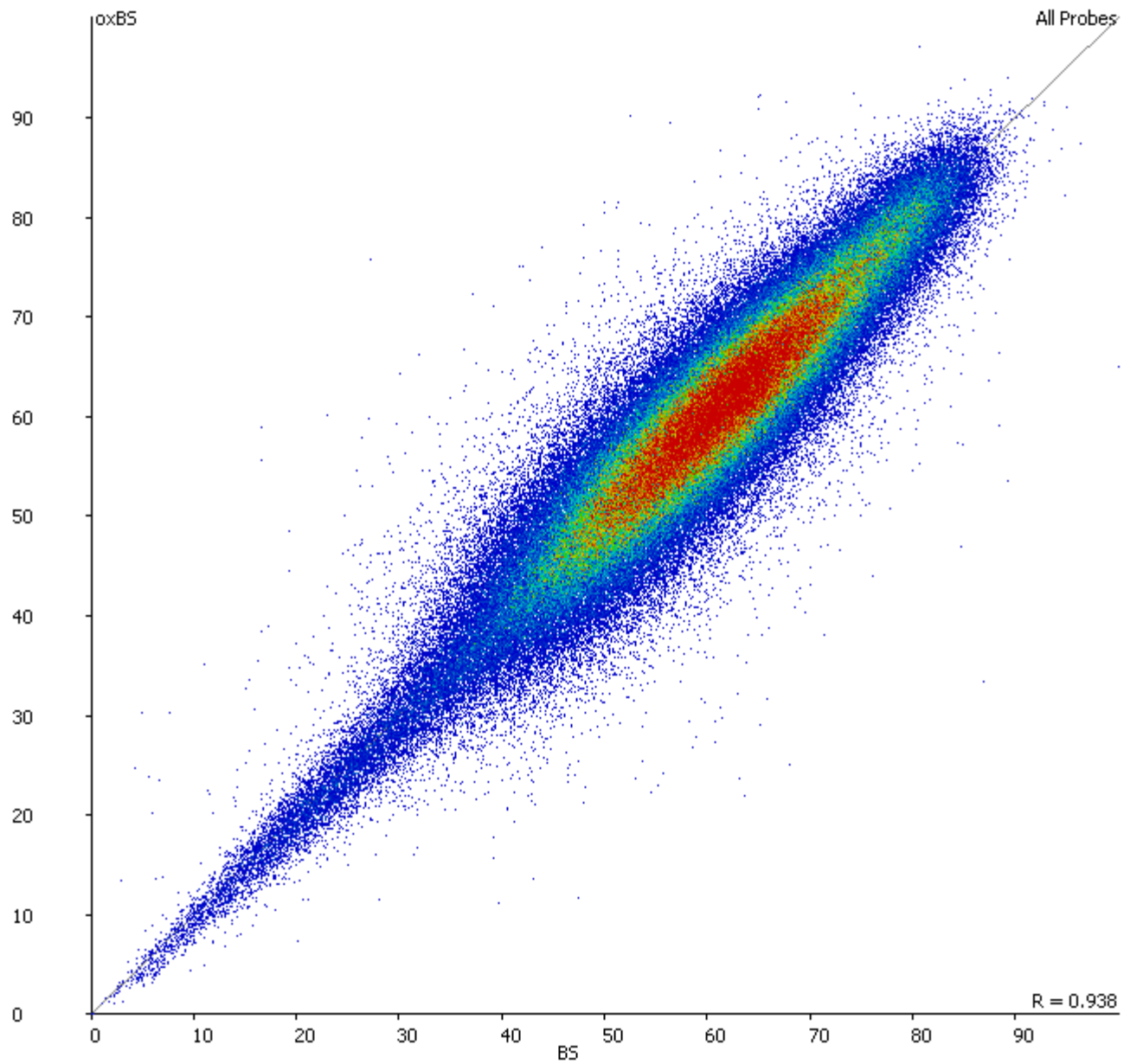
Quantitative sequencing of 5-methylcytosine and 5-hydroxymethylcytosine at single-base resolution
Science, 2012 May 18;336(6083):934-7



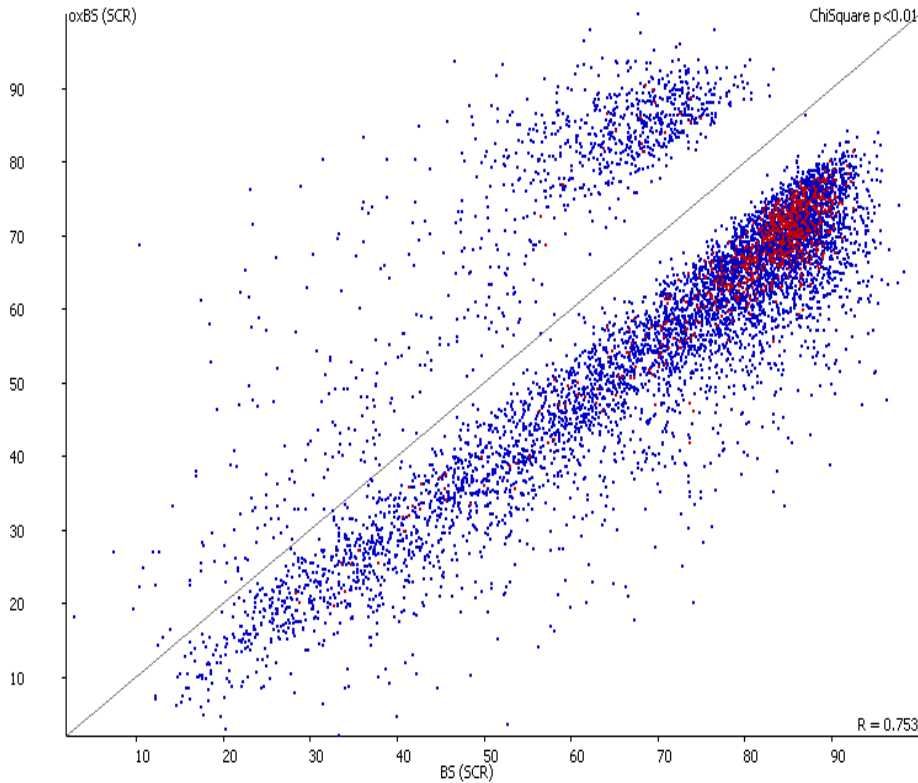
Detecting 5-formylcytosine using Reduced Bisulfite-Seq (redBS)



M.J. BOOTH, NATURE CHEMISTRY Quantitative sequencing of 5-formylcytosine in DNA at single-base resolution



oxBS: identifying target regions

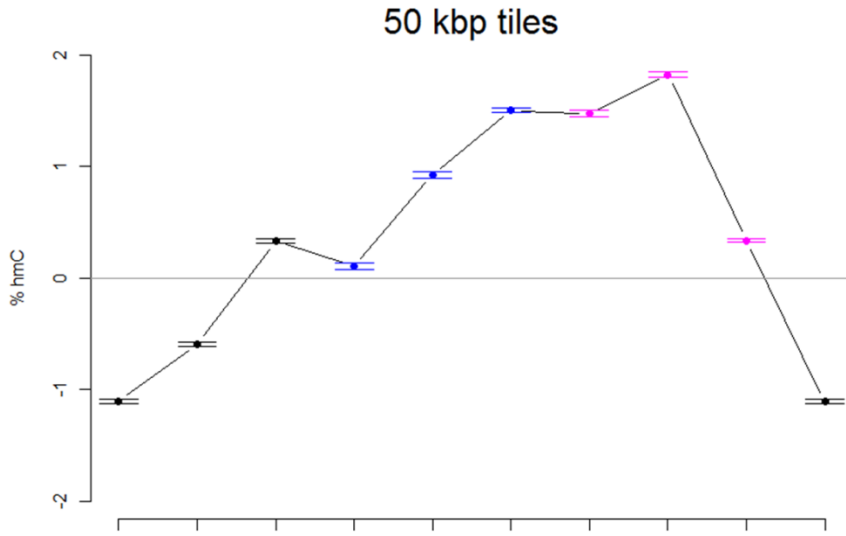


Gives an idea about false positive rate

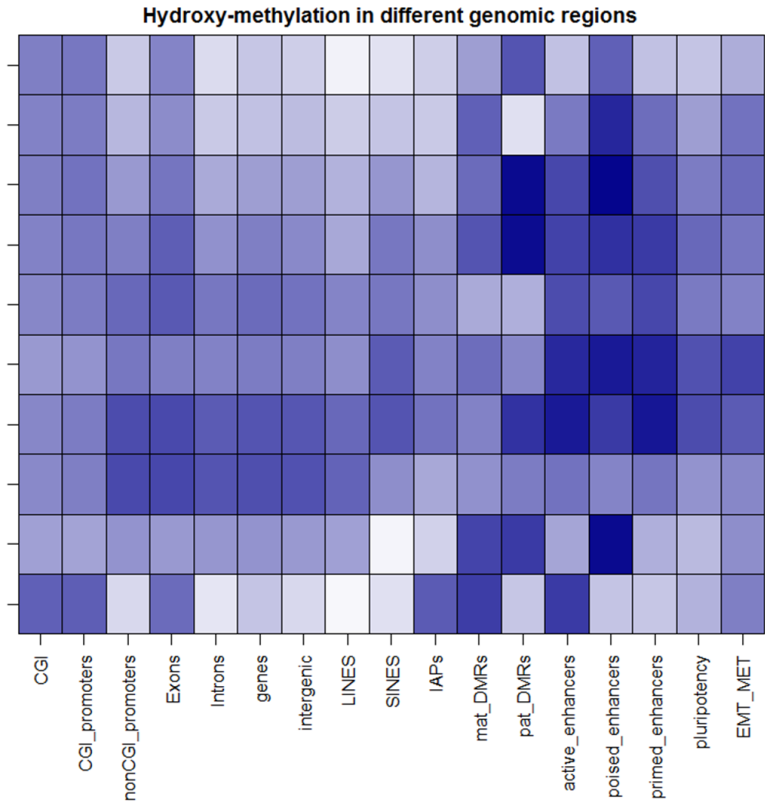
Analysis options to gain more power:

- larger running windows
- looking for sets/functional sets

hmC as difference BS – oxBS



genome-wide difference:
sometimes negative values...



relative differences