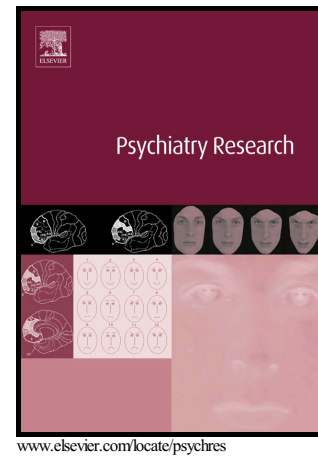


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## **DNA redox modulations and global DNA methylation in Bipolar Disorder: Effects of sex, smoking and illness state**

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### **Abstract**

DNA redox modulations and methylation have been associated with bipolar disorder (BD) pathophysiology. We aimed to investigate DNA redox modulation and global DNA methylation and demethylation levels in patients with BD during euthymia, mania or depression in comparison to non-psychiatric controls. The roles of sex and smoking as susceptibility factors for DNA redox modulations and global DNA methylation and demethylation were also explored. Levels of 5-methylcytosine (5-mC), 5-hydroxymethylcytosine (5-hmC) and 8-hydroxy-2'-deoxyguanosine (8-OHdG) were assessed in DNA samples of 75 patients with DSM-IV BD type I (37 euthymic, 18 manic, 20 depressive) in comparison to 60 non-psychiatric controls. Levels of 5-mC and 5-hmC were assessed using Dot Blot as a screening process, and verified using ELISA. Levels of 8-OHdG were assessed using ELISA.

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