Association studies of 5-HT$_{2A}$ and 5-HT$_{2C}$ serotonin receptor gene polymorphisms with prophylactic lithium response in bipolar patients

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**Abstract:**
Lithium is one of the most commonly used drugs in the prophylaxis and treatment of bipolar disorder. The mechanisms of mood stabilization by lithium incorporate its effect on serotonergic neurotransmission. This paper investigates a relationship between response to lithium prophylaxis and polymorphisms in two genes: T102C of 5-HT$_{2A}$ receptor and G68C (Cys23Ser) of 5-HT$_{2C}$ serotonin receptor gene. Genotypes were estimated in 92 bipolar patients (39 males and 53 females) who have been taking lithium for at least 5 years. The patients were classified as excellent responders, partial responders and non-responders to lithium. The obtained results suggest that these polymorphisms may not be related to the degree of prophylactic lithium response.

**Key words:**
lithium prophylaxis, bipolar disorder, 5-HT$_{2A}$ – serotonin receptor 2A gene, 5-HT$_{2C}$ – serotonin receptor 2C gene, pharmacogenetics