

The association between the COMT Val158Met polymorphism and psychological and cognitive performance

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The Catechol-O-methyltransferase (COMT) enzyme catalyzes catecholamines is critical for the clearance of dopamine (DA) in the prefrontal cortex (PFC). For this reason, the COMT gene is thought to play an important role in cognitive processing. We carried out a series of experiments aimed at clarifying the role of COMT on emotion as well as cognitive processing. The first experiment tested the role of the COMT genotype on various mood and health measures under non-stress conditions, the second experiment tested the role of the COMT genotype across a variety of cognitive domains using the Joggle Research platform, the third experiment built on findings from the first two experiments to test the role of the COMT genotype on mood and cognition in a social stress (the trier social stress test, TSST) and non-stress (control TSST) condition. We found that COMT genotype status can influence emotion and cognitive processing under non-stress conditions.