Differences in memory function between 5HT1A genotypes in patients with major depressive disorder

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INTRODUCTION
This poster is financially supported by Bracket.

■ Bosia et al (2011) studied the effects of the 5-HT1A-R genotype on cognition in schizophrenic patients, and identified that the 5-HT1A-R C/C genotype was associated with significantly higher scores on a Picture Sequencing Task than the C/G and G/G genotypes.

■ The purpose of this study was to determine whether 5-HT1A-R genotype had an influence on the profile of cognitive function in patients with major depressive disorder (MDD).

METHODS
The study sample was 455 MDD patients between the ages of 18 and 55 years who met DSM-IV criteria for MDD, with current-episode duration of at least 1 month but not longer than 12 months.

■ The patients underwent 5-HT1A-R genotyping.

■ The patients performed a selection of automated tests of attention, information processing, executive control, working and episodic memory from the CDR System.

■ The volunteers had previously performed the entire 20 minute sequence of tests twice in order to overcome practice and familiarity effects.

■ Performance in various domains was contrasted between the three 5-HT1A-R genotypes using ANOVA.

DISCUSSION & CONCLUSIONS

■ Findings in schizophrenics show CC patients to be superior on a task unrelated to the tests seen to be sensitive here, and not to differ on some that are similar. The cognitive implications of different genotypes are worthy of future study.

■ Neither did measures of focussed or sustained attention, or the time taken to retrieve information from working and episodic memory.

■ MDD patients with C/C genotype for 5HT1A are selectively superior on retaining information in working and episodic memory than C/G and G/G genotypes. The effect sizes are in the small to medium range.

■ Apart from a trend for higher CGI-S in the C/C group, none of the other clinical or behavioural scales showed any differences between the three genotypes.

■ Decreased firing in 5HT neurons and reduced post-synaptic 5HT1A receptors in depressed patients with G/G genotype.