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ASSOCIATION STUDY BETWEEN THE C3435T POLYMORPHISM OF THE MULTIDRUG RESISTANCE 1 (*MDR1*) AND INTERPERSONAL SENSITIVITY

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P-glycoprotein, which is encoded by the multidrug resistance 1 (*MDR1*) gene, serves as a barrier to entry and as an active elimination for xenobiotics and cellular metabolites including cortisol, which is implicated in multiple brain functions. Meanwhile, previous studies suggested that genetic factors and cortisol are involved in formation of interpersonal sensitivity, a personality trait predisposing to depression. In the present study, we examined the effects of the C3435T *MDR1* polymorphism on interpersonal sensitivity. The subjects were 842 healthy Japanese volunteers. The mean age ±SD of the subjects was 26.7±8.1 (490 males and 352 females). The C3435T polymorphism of *MDR1* gene was detected by a PCR method, and interpersonal sensitivity was assessed by the Interpersonal Sensitivity Measure (IPSM). In total subjects, the C allele of the C3435T *MDR1* polymorphism was associated with higher scores of the IPSM. In females the C/C genotype group had higher IPSM scores than the C/T genotype group and the T/T genotype group, and the C/T genotype group had higher IPSM scores than the T/T genotype group. In males no significant association was found between the *MDR1* genotype and the IPSM scores. The present study suggests that the C3435T polymorphism of the *MDR1* gene affects formation of a depression-prone personality trait in Japanese females.

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