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No evidence for association between DRD3 and COMT with schizophrenia in a Malay population

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ABSTRACT. Molecular components of the dopamine D3 receptor (DRD3) may play an important role in the pathophysiology of schizophrenia. Previous studies have demonstrated an association between DRD3 Ser9Gly and cathechol-o-methyltransferase (COMT, SNP = rs165656) polymorphisms and schizophrenia but the results were inconclusive. We investigated this apparent association between Ser9Gly (A/G) polymorphism and an intronic SNP (dbSNP or rs165656) in 261 Malay patients diagnosed with schizophrenia and 216 controls, using PCR-RFLP. The genotype distribution of the polymorphism DRD3 Ser9Gly was in Hardy-Weinberg equilibrium (HWE) for patients (P = 0.1251) and out of HWE for controls (P = 0.0137). However, both healthy controls and schizophrenia patients were out of HWE for the polymorphism COMT rs165656. Based on allele and genotype frequencies in both groups, we found no significant association of DRD3 Ser9Gly polymorphisms and COMT (rs165656) with schizophrenia in Malays. Further studies should examine the

association between other dopamine-related genes and the behavioral phenotypes of schizophrenia.

Key words: Schizophrenia; Polymerase chain reaction; Single nucleotide polymorphism; Dopamine D3 receptor; Restriction fragment length polymorphism; Cathechol-o-methyltransferase

