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KEY WORD: THIOPURINE METHYLTRANSFERASE/ PHARMACOGENETICS.  
POLYMORPHISM/ 6-MERCAPTOPURINE

PARINDA PERADHAMANON : THIOPURINE METHYLTRANSFERASE ACTIVITY  
IN RED BLOOD CELLS OF THAI POPULATION. THESIS ADVISOR : ASSO. PROF  
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Thiopurine methyltransferase (TPMT, E.C. 2.1.1.67) is a cytoplasmic enzyme that catalyzes the S-methylation of aromatic and heterocyclic sulfhydryl compounds such as 6-mercaptopurine. In the present investigation, TPMT activity in red blood cell was measured from blood samples of 539 randomly selected Thai subjects. The activity of the TPMT was controlled by genetic polymorphism with the trimodal distribution. Most of the studied Thai subjects were the intermediate TPMT metabolizers with the frequency of 95.35%. The low and high TPMT metabolizers were found to be 0.93% and 3.72% respectively. Sex, blood groups, diseases or smoking had no effects on TPMT activity. This finding supported the influence of interethnic differences on the activity of thiopurine methyltransferase.

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