

RED BLOOD CELL DUFFY ANTIGEN RECEPTOR FOR CHEMOKINES AND SUSCEPTIBILITY TO *PLASMODIUM VIVAX* INFECTION IN THAIS

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Abstract. *Plasmodium vivax* is the most prevalent malaria infection in Thailand. *P. vivax* uses Duffy Antigen Receptor for Chemokines (DARC) or Duffy antigen (Fy) as a receptor for entry into reticulocytes. Polymorphism of DARC exon 2 gene (FYA/FYB) in 40 *P. vivax*-infected subjects were investigated using nested PCR of blood samples spotted on filter paper collected during August 2013 to November 2013 from various malaria clinics in Thailand. Distribution of DARC genotypes was FYA 62.5%, FYB 20% and FYAB 17.5%, consistent with that of Hardy-Weinberg equation. Mutation G17A was found in both FYA and FYB alleles, resulting in Gyl48 and Asp48 of Fy^a and Fy^b antigen, respectively. Mean parasitemia among the three groups is not statistically different. To the best of our knowledge, this is the first such study in Thailand.

Keywords: *Plasmodium vivax*, Duffy Antigen Receptor for Chemokines (DARC), Fy^a, Fy^b

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