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KEY WORD:

: MAJOR ZOOLOGY

PLASMODIUM FALCIPARUM / ALLELIC POLYMORPHISM / Pf155/RESA

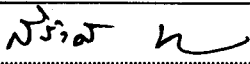
SIRIWADEE CHOMDEJ : ALLELIC POLYMORPHISM IN Pf155/RESA GENE OF
PLASMODIUM FALCIPARUM IN THAILAND.

THESIS ADVISOR : ASSO. PROF. SODSRI THAITHONG, 96 pp.

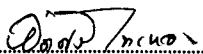
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The ring-infected stage erythrocyte surface antigen (Pf155/RESA) have been characterized and proposed as a falciparum malarial vaccine candidate. To further investigate the diversity of the Pf155/RESA antigen in the area of 2727th-2846th of the upstream C-terminal, DNA fragment encompassing this region was amplified, by the polymerase chain reaction, and followed by sequencing. Four different alleles were obtained from *P. falciparum* 124 isolates collected from Tak, Chonburi, Trad, Chantaburi, Songkla province and Tropical Medicine Hospital, Bangkok during 1980-1993, their sequences were compared with those previously reported. The most prevalent allelic variant is the F32-type which was present in 63% of the samples. Less abundant allele, 3rd type, was detected only 19% among all isolates. The 3rd type was identical to the F32-type except for one amino acid replacement at position 2828 nucleotide. The 4th type was found 14% and had one amino acid change compared to F32-type at position 2828. The FC27-type had found in the lowest frequency (4%) but had amino acid changes at positions 2764, 2772, 2774, 2782, 2788 and 2828. Analysis of nucleotide substitutions in this block had shown that tranversion occurred more frequently than transition and all changes were nonsynonymous substitutions.

ภาควิชา ชีววิทยา.....

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