

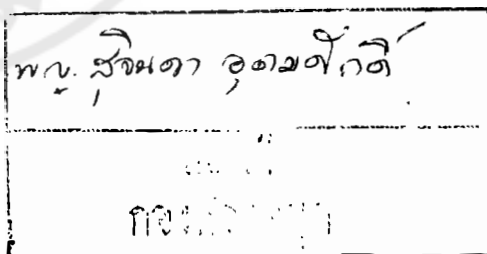
SEQUENCE ANALYSIS AND APPLICATION OF  
CLONED DNA FROM PLASMODIUM FALCIPARUM

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A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF  
THE REQUIREMENTS FOR THE DEGREE OF  
MASTER OF SCIENCE  
(BIOCHEMISTRY)



IN THE

FACULTY OF GRADUATE STUDIES

OF

MAHIDOL UNIVERSITY

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1984

BANGKOK, THAILAND

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## ABSTRACT

DNA from the human parasite, P. falciparum, isolate K1<sup>\*</sup>, was cloned in Pst I/EcoR I site of pBR 322 vector and transformants were selected through ampicillin-sensitive and tetracycline-resistant characteristics. One clone, pBR K1-14, was used as a probe in Southern hybridization with various Plasmodial DNA cut with a number of restriction enzymes. The probe could differentiate between two different isolates (K1 and G112) and between fresh isolates and those maintained for a long period under in vitro cultivation (K1 and K1<sup>\*</sup>, or G112 and G112<sup>\*</sup>), but indicated no differences between original isolates (K1 and G112) and those obtained after 50 generations (K1<sup>'</sup> and G112<sup>'</sup>). Furthermore, the probe could be used to detect P. falciparum oocyst and sporozoite DNA in infected Anopheles mosquitoes. The sequence of parasite DNA insert of pBR K1-14 was determined by the Maxam-Gilbert method. Preliminary data indicated that the 760 base-pair fragment had 18 % GC content, a running sequence of 20 thymine residues and some repeating sequence units.