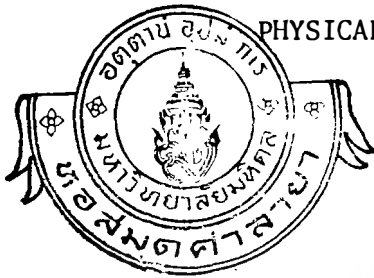


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PHYSICAL MAPPING OF HUMAN GLOBIN GENES
IN THAI POPULATION

BY

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จาก

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Abstract

Human DNA from normal Thai people and various cases of anemic patients from Siriraj Hospital were analysed by cutting with 3 restriction enzymes, EcoRI, BamHI, and Bgl II, mainly prepared in our laboratory. After running agarose gel electrophoreses, they were blot-transferred to nitrocellulose papers and hybridized with high specific activity of (^{32}P) JW 101 and (^{32}P)-Pst β fragment to probe the α and β globin genes successively. Heterogeneity of size of α globin EcoRI fragment was observed in 2 out of 7 normal people in which 21 Kb DNA was observed rather than the normal 23 Kb DNA. In one case of Hb H disease patient, a shorter DNA segment was also detected. In one β thalassemia patient with Hb E production, a 100-150 nucleotide shorter BamHI fragment 5' to the β globin gene was observed which might be the cause for a reduced β -globin production. In one β^0 -thalassemia patient, no 9.5 kb Bam HI fragment of β globin gene was detected. Further studies are required to confirm these discoveries. The rest showed normal size of EcoRI, BamHI and Bgl II of α globin and β globin DNA fragments comparable to other reports.