

学位論文抄録

Human leukocyte antigen-associated HIV-1 CRF02_AG *gag* and *vif*
polymorphisms in Ghana

(ガーナにおける HIV-1 CRF02_AG *gag*・*vif* 領域の HLA 関連変異)

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Abstract of the Thesis

Background and purpose: In human immunodeficiency virus type-1 (HIV-1) infections, cytotoxic T-lymphocyte (CTL) responses targeting human leukocyte antigen (HLA)-restricted viral epitopes exert strong suppressive pressure on viral replication and frequently select for mutations resulting in viral escape from CTL recognition. Numerous data on these HLA-associated mutations in HIV-1 subtypes B and C have been amassed with few reports described in other subtypes. We investigated HLA-associated mutations in HIV-1 subtype CRF02_AG prevailing in Ghana, Western Africa.

Results: We determined viral *gag* sequences in 246 out of 324 HIV-1-infected Ghanaians. Phylogeny analysis revealed that 200 (81.3%) were infected with HIV-1 CRF02_AG. Full *gag* and *vif* sequences were obtained from 199 and 138, respectively, out of the 200 individuals infected with CRF02_AG and subjected to determination of HLA-associated mutations. Our analysis found HLA-associated HIV-1 CRF02_AG nonsynonymous polymorphisms at nineteen sites, thirteen in *gag* and six in *vif*, including those newly determined.

Discussion: Generation of this data is an important contribution to our understanding of HIV-1 CRF02_AG and host T cell interaction.