

CHAPTER VI

CONCLUSION

In this study, we present data of HIV-1 gag, pol cross-clade specific cytotoxic T lymphocytes and gag epitope mapping in asymptomatic HIV-1-infected Thai patients. The objectives of this study were to find the prevalence of cross-clade CTL activities in HIV-infected Thais with CD4+ \geq 300 cell/cu.mm. and to identify common and/or novel HIV-1 CTL gag epitopes. The prevalence of HIV-1 gag, pol specific CTL showed that, in 25 HIV-1-infected Thai patients with mean CD4+ count of 540 cells/cu.mm. (range = 307-978), median of plasma HIV-RNA 6936 copies/ml (range = 886-57022) and ARV naive, were shown detectable HIV-1 specific CTL against HIV-1 gag A is the most common (25/25, 100%), followed by HIV-1 pol A (21/25, 84%)

In Our HIV-1 gag, pol cross-clade specific CTL among known HIV-1 clade A/E infected patients (n = 23) shown that HIV-1 gag region is the highest cross-clade CTL activity (against clade A and B, 61%, 14/23). However, only 22% (5/23) showed cross-clade CTL activity against pol region.

In HIV-1 gag A CTL epitope mapping, eighteen gag A CTL epitopes were identified from nineteen clade A/E patients. Seven epitopes locate in p17, ten in p24 and one in p6 regions. The most common gag A CTL epitope found in these patients is gag A at the position 271-290 in p24 region (7/19 patients or 37%). In the HLA class I-restriction study, 3 patients were analyzed. Three epitopes were found to be restricted by HLA A2, B7 and Cw1. A new HLA Cw1 restricted p24 CTL epitope: gag A residues 271-290: NKIVRMYSVPSILDIKQGPK was detected. Three potential CTL epitopes were also identified and needed further investigation.

Thus, HIV-1 gag is the most common target of CTL responses among HIV-1 infected Thais. In addition, cross-clade CTL activity against gag is 3 folds higher than pol. Thus, HIV-1 gag clade A is suitable to be included in a candidate HIV vaccine to be evaluated in Thailand.