

Protective effects of *IL4 -589T* and *RANTES -28G* on HIV-1 disease progression in infected Thai females

Nuanjun WICHUKCHINDA

NRCT- 10225

Senior Scientist

National Institute of Health, Department of Medical Sciences,
Ministry of Public Health

Japanese Advisor : Toshihiro HORII

Professor, Osaka University

Objective: To evaluate the effect of polymorphisms in *IL4* and *RANTES* promoters on disease progression in HIV-1 infected Thais.

Material and Methods: 246 DNA samples from antiretroviral-drug free HIV-1 infected females were genotyped for *IL4* and *RANTES* promoter polymorphisms by PCR-RFLP. Associations of genotype with HIV-1 disease



progression were assessed with respect to baseline clinical data including plasma HIV-1 load, CD4+ cell counts, and proportion of symptomatic/AIDS, and survival status after 3 years follow up.

Results: Patients with homozygous *IL4 -589T* allele showed a significantly lower viral load ($p = 0.005$) and higher cd4+ cell count ($p = 0.003$) than the other patients with heterozygous *IL4 -589C/T* or homozygous *IL4 -589C* allele. The Kaplan-Maier analysis demonstrated an apparent but insignificant trend towards better survival in homozygous *IL4 -589T* patients. On the other hand, patients with *RANTES -28G* allele showed a significantly better survival while those with *RANTES In1.1C* allele without *RANTES -28G* showed a significantly poorer survival compared with those who did not possess neither *RANTES In1.1C* nor *RANTES -28G* ($P=0.02$), although those polymorphisms only weakly associated with baseline viral load and CD4+ cell counts.

Conclusion: Our results implicate the significant protective effect of *IL-4 -589T* and *RANTES -28G* on HIV disease progression in Thais. In contrast, *RANTES In1.1C* without *RANTES -28G* had an accelerating effect on HIV disease progression.