

## VI. SUMMARY

The genotype distribution and nucleotide sequence polymorphism of the 56 kDa protein gene of *O. tsutsugamushi* were studied in 80 positive amplification of *O. tsutsugamushi* DNA patients (age from 7 years to 60 years) admitted to hospitals at the 8 Regional Medical Sciences Centers of Thailand. The genotyping of *O. tsutsugamushi* was determined by using the serotype specific primers. The result was also confirmed by nucleotide sequencing technique. Two distinct genotypes: Karp genotype (97.5%) and Kato genotype (2.5%) were observed. No Gilliam genotype was detected in any of the sample. Looking at the genotype distribution, Karp genotype accounted for almost 100% of the *O. tsutsugamushi* genotype circulated in Thailand. In the 56 kDa protein gene sequence analysis, 78 out of 80 samples comprising Karp genotype had a sequence identical to the reference prototype. As 2 out of 80 sample comprising Kato genotype also had a sequence identical to the reference prototype. This study revealed the information in the molecular epidemiology of *O. tsutsugamushi* and the sequence of the antigen coding gene, which may lead to the development of a vaccine against *O. tsutsugamushi* and diagnostic test kit.

ลิขสิทธิ์มหาวิทยาลัยเชียงใหม่

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