

Saowaluck Jitchum 2009: Molecular Epidemiology of *Bartonella* Species in Stray Cats Resided in Temples in Bangkok Areas. Master of Science (Agricultural Biotechnology), Major Field: Agricultural Biotechnology, Interdisciplinary Graduate Program. Thesis Advisor: Associate Professor Sathaporn Jittapalapong, Ph.D. 120 pages.

The pet ownership is risk for various diseases which their pets can serve as a reservoir of internal and external parasites capable of being transmitted to humans. Cat scratch disease (CSD) is an infectious disease which caused by *Bartonella* species. Cat can serve as a host for these bacteria and cat fleas (*Ctenocephaledes felis*) from infected cat can distribute the pathogen among the cats. The objectives of this study were to investigate the infective rate of *Bartonella* infection in stray cats resided in monasteries of Bangkok metropolitan by the PCR assay and find out association between *Bartonella* infection and risk factors. The PCR result was shown 803 from 1,488 cats infected with *Bartonella* species. A total of 1,488 samples were detected as *B. henselae* 35% (521/1,490), *B. clarridgeiae* 15.26% (227/1,490) and mixed infection 3.7% (55/1,490). The statistical analysis results were shown significant between risk factors and infection. Poor environmental condition was associated with *Bartonella* infection ($p = 0.01$). The other factors comprising age, sex, health condition, ectoparasite and density condition were not related to the infections. The positive samples of *Bartonella* species were found in 432 monasteries from 50 districts. Two species of *Bartonella*, *B. henselae* and *B. clarridgeiae* were found from the overall districts (100%). The result showed that stray cats were crucial reservoirs and can transmit the pathogen to housed cats and human who live in the same environment. The gain basis knowledge is useful for the prevention and control of distribution in both animals and humans from the infection of *Bartonella* species.

Student's signature

Thesis Advisor's signature

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