

# INCIDENCE AND PRESENCE OF VIRULENCE FACTORS OF *STREPTOCOCCUS SUIS* INFECTION IN SLAUGHTERED PIGS FROM CHIANG MAI, THAILAND

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**Abstract.** This study was designed to determine the incidence of *Streptococcus suis* infection in slaughtered pigs raised in industrial facility and backyard system in Chiang Mai City, Thailand. A total of 90 tonsils and submaxillary salivary gland/lymph node samples from slaughtered pigs raised in industrial facility and 122 samples from slaughtered pigs raised in backyard system were collected. Isolation and identification of *S. suis* were conducted using standard bacteriological methods. Farm management and risk factor data were collected by a questionnaire. Serotyping and presence of virulence factor genes, *epf*, *mrp* and *sly*, were determined by multiplex PCR assay. The overall incidence of *S. suis* in this study was 9% ( $n = 212$ ) and the incidence is significantly higher in districts located at a greater distance south of Chiang Mai City. *S. suis* serotype 2 was present more in healthy pigs (43%) than ill pigs (10%). Every *S. suis* isolate carried *mrp* and *sly* and ill pigs carried *epf* (80%) more than healthy pigs (57%). However, the probability of *S. suis* serotype 2 with *epf*<sup>+</sup> (0.245) detected in healthy pigs was higher than in ill pigs (0.08) indicating people may have a higher risk of being infected with *S. suis* from healthy than ill pigs.

**Key words:** *Streptococcus suis*, pig, serotyping, virulence gene

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