PREVALENCE, VIRULENCE, ANTIBIOGRAM PROFILES, AND GENETIC RELATIONSHIP OF *STAPHYLOCOCCUS EPIDERMIDIS* FROM MEAT IN SOUTHERN THAILAND

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Abstract. *Staphylococcus epidermidis* is a gram-positive bacterium responsible for nosocomial infection worldwide and also is considered one of the causes of food poisoning. *S. epidermidis* was investigated in raw meats in this study. Of 603 bacterial isolates from 100 raw meat samples obtained from open markets in southern Thailand, nine samples based on *recN* molecular markers yielded 14 *S. epidermidis* strains, one from beef, four from chicken and nine from pork. Eight *S. epidermidis* strains from chicken and pork harbored *atlE* encoding surface-associated autolysin, responsible for rapid initial attachment to polymer surface, and one strain from beef contained *atlE* and *ica* operon, encoding polysaccharide intercellular adhesion proteins. Fifty, seven and forty-three percent of the strains demonstrated formation of strong, moderate and weak biofilms, respectively. Antibiogram profile revealed 50% of strains were fusidic acid-resistant and no strain methicillin- or multidrug-resistant. DNA profiling by BOX-PCR classified at 80% genetic similarity the 14 strains into six clusters, with *S. epidermidis* strains from different pork samples showing highest (97%) genetic relatedness. These results provide primary data on *S. epidermidis* properties from raw meats in this region of the country, which will contribute to a fuller picture of the epidemiology of this pathogen in southern Thailand and to the development of a public health program of control and prevention.

Keywords: *Staphylococcus epidermidis*, meat, virulence factor, Thailand

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