ISOLATION OF NEW SPECIES OF CORYNEBACTERIA FROM URINARY TRACT OF PIGS AND PRODUCTION OF MONOCLONAL ANTIBODIES AGAINST BOVINE CORYNEBACTERTAL PILI

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Urease-positive corynebacteria were isolated from the prepuce of 50 out of 77(64.9%) hogs and from the urinary bladder and urethra of 3 out of 10(30%)sows. Ninety-three isolates were divided into 4 groups, A, B, C and ungrouped, based on their morphological, cultural and biochemical characteristics. Group A strains were the highest in frequency (53.2% of hogs), followed by strains of group B (5.2%), group C (2.6%) and ungrouped (10.4%). Corynebacteria of group A and ungrouped were also isolated from sows. A numerical taxonomic study of the 94 features of the strains showed that there was at least 1 phenon, which consisted of group A strains. The remaining strains did not form distinct phena. Phenon 1 (group A) seemed to be a new species of genus *Corynebacterium*, however, further study is necessary to define the taxonomic position.

Four and one monoclonal antibodies to the pill of *C. renale* 115 and *C. pilosum* 92 were produced. These monoclonal antibodies bound to the purified pili of homologous strain in enzyme-linked immunosorbent assay (ELISA) and agglutinated piliated bacteria (P^+), but not non-piliated bacteria (P^-), of each homologous strain. Anti-*C. pilosum* 92 pili monoclonal antibody in the form of IgG and Fab inhibited the adherence of *C. pilosum* $92P^+$ bacteria to the isolated bovine vulva epithelial cells. Of the monoclonal antibodies against *C. renale* 115 pili, one inhibited the adherence of *C. renale* $115P^+$ bacteria to the bovine vulva epithelial cells, while the other did not, indicating the possible presence of different antigenic determinants on the pilus.