DETECTION OF THE PRESENCE OF *bla*TEM GENE AS *Extended Spectrum Beta-lactamase* GENES ENCODER OF *Klebsiella pneumoniae* ISOLATED FROM SWAB OF FOOD-PRODUCING ANIMALS

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ABSTRACT

Klebsiella pneumoniae is one of nine bacteria in resistance to antibiotics in concern. This research aims to detect any gene of *bla*TEM in bacteria of the *Klebsiella pneumoniae* isolated from swab of food-producing animals. In this study, 195 swab samples taken from 17 locations of sampling. A cultivated sample obtained on selective medium and has done through the test identification, antibiotic sensitivity test method using Kirby-Bauer of agar diffusion against antibiotics of Ampicillin, Cefotaxime, Amoxcilin, Meropenem and Trimetrophrim-Sulfamethoxazole and afterwards tested with PCR method for detecting the gene it is causing antibiotic resistance. The results showed that 195 samples were found positive of *Klebsiella pneumoniae* isolates by as much as 10 sample i.e., 4 samples of dairy cows (SP-S1, SP-S3, SP-B2, SP-G4), two samples of beef cattle (SPT-K1, SPT-K2), 1 chicken samples (A-W5) and 3 samples of fish (IN-P2, IN-P3, IN-S3). Ten positive isolates were found indicating the resistant to Amoxycillin as much as 90% (9/10) and PCR tests also showed 9 sample (90%) have a positive gene *bla*TEM. Nine samples of the whole of the positive samples were resistant to the antibiotic Amoxicillin, i.e., SP-S3, SP-B2, SP-G4, SPT-K1, SPT-K2, A-W5, IN-P2, IN-P3, and the IN-S3. Based on the results of this research, with the discovery of antimicrobial agent resistance i.e. ESBL genes of encoder (*bla*TEM), researchers believe that the vast majority of isolates *Klebsiella pneumoniae* producing food animals have had ESBL encoding gene.

Key words: *Klebsiella pneumoniae*, ESBL, food-producing animals, antibiotic resistance, PCR method**.**