

## **Prevalence, distribution and antibiotic resistance of emergent *Arcobacter* spp. from clinically healthy cattle and goats**

### **ABSTRACT**

Prevalence, distribution and antibiotic resistance of *Arcobacter* spp. were investigated in cattle, goats, floor and treated water samples in this study. The prevalence of *Arcobacter* in adult and young was recorded as 8/110 (7.27%) and 4/83 (4.81%), respectively, which showed insignificant difference ( $P = 0.3503$ ) in detection rates between adult and young cattle. A total of 33.33% of the floor samples and 11.11% of the treated water samples analysed were determined as positive for *Arcobacter*. Among the species isolated, over all, *A. butzleri* (45%) was the most frequently detected species, followed by *A. skirrowii* (5%). *A. butzleri* was isolated from adult cattle, floor and water samples at the rates of 75.0%, 33.4% and 50%, respectively. Co-colonization of species was not uncommon, and 50% of the samples were carrying more than one *Arcobacter* species. Only 12.5% sample from cattle (adult) was detected positive for only *A. skirrowii*. All samples from young animals, floor and water contained mixed isolates. None of the samples from goat farm was found to be carrying *Arcobacter* species. On profiling of antimicrobial resistance patterns, it was found that only one *A. butzleri* isolate (3.7%) was sensitive to all nine antibiotics tested. *A. butzleri* was found highly resistant to ampicillin (55.6%), followed by cefotaxime (33.4%) and ciprofloxacin (33.4%). Overall, 20% of the isolates showed multidrug resistance (resistant  $\geq 4$  antibiotics). Gentamicin and enrofloxacin can be used as drugs of choice for the treatment for *Arcobacter* infections

**Keyword:** Antibiogram; *Arcobacter*; Cattle; Goats; Prevalence.