# Assessment of antibiotic resistance phenotypic pattern in some commensal bacteria isolated from meat and dairy products.

BY

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## General Abstract

This study investigated the pattern of antibiotic resistance in some commensal bacteria isolated from meat and dairy products. This study is important because, antibiotics resistance has become a serious public health concern with economic and social implications throughout the world. The use of antibiotics in animal husbandry has promoted the development and abundance of antibiotic resistance in farm environments. This can cause a potential health problem since resistance genes of pathogenic microorganisms can be transmitted from foodstuffs such as dairy and meat products to human. Therefore, the objective of this study was to assess the antibiotic resistance pattern of commensal bacteria isolated from meat and dairy products using phenotypic antibiotic susceptibility tests. Antibiotic susceptibility testing was performed by disk diffusion method on Mueller-Hinton agar according to the Clinical Laboratory Standards Institute (2007) standards. A total of twenty eight (28) antibiotics were used to determine the antibiotic susceptibility of commensals which include eight (8) selected *Acinetobacter* isolates, twenty (20) *Staphylococcus* isolates and sixteen *Morganella morganii* isolates. There was multidrug resistance observed among in all three groups of isolates. Moreover, this study provided information of antibiotic usage in food-producing animals in South Africa and the implication and impact in food chain. Study of antibiotic resistance in developing countries such as South Africa is important as the information could enhance prudent use of antibiotics in food production by detecting transfer of resistant bacteria or resistance genes from food animals to humans.