

**TITLE:** PATHOGENIC POTENTIAL OF *Campylobacter coli* STRAINS ISOLATED FROM SHEEP

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**ABSTRACT:** The species of *Campylobacter* are distributed in nature, but the main reservoir is the gastrointestinal tract of domestic mammals and birds, may be pathogenic for both animals and humans. Humans can be directly infected through contact with animal feces and contaminated carcasses, or indirectly through ingestion of food contaminated with feces. The prevalence of campylobacteriosis has been increasing in several countries, as a consequence this disease has become a concern for public health and studied by health agencies. Unfortunately, however, in Brazil it is still an underdiagnosed and underreported disease. These bacteria have specific properties such as adhesion, colonization and invasiveness, which are related to their pathogenic potential. For *Campylobacter coli* the *cadF*, *racR* and *dnaJ* genes are involved in the steps of adhesion and colonization in host cells. This study aimed to identify the pathogenic capacity of *Campylobacter coli* isolates from sheep feces, through the presence of *cadF*, *racR* and *dnaJ* genes. A total of 421 faecal samples were collected from sheep from 20 herds. Of these samples, 17 were positive for *Campylobacter coli* and had their DNA extracted from the kit "Qiagen DNA Easy Blood and Teissues". To detect the virulence genes *cadF*, *racR* and *dnaJ* the polymerase chain reaction (PCR) was performed. The amplified products were identified in agarose gel electrophoresis (1.5%), stained with BlueGreen and visualized with UV light. The results demonstrated that 94.12% (16/17) of the isolates were positive for the *cadF* gene and 70.59% (12/17) for the *racR* gene. For the *dnaJ* gene, 17.65% (3/17) of the isolates were positive. This result confirms the great pathogenic potential of *Campylobacter coli* isolates, with the ovine specie involved in the epidemiological chain of the agent. It is necessary to implement strict measures of prevention and control in the management of animal husbandry and also in the slaughter to avoid contamination of the meat.

**Keywords:** *Campylobacter*, Campylobacteriosis, molecular diagnosis, sheep

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