

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

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ABSTRACT: Diarrheal diseases are a major public health problem throughout the world, especially in developing countries. Among the most important etiological agents that cause these cases, we highlight *Campylobacter jejuni*. This bacterial species is still involved in Guillain-Barré syndrome. Infection routes include consumption of meat and water contaminated with animal feces or direct contact with feces on rural properties. Infected sheep may have reproductive problems. The microorganisms present specific properties such as the capacity of adhesion, colonization and invasion, which are related to their pathogenic potential. For *Campylobacter* spp. the *cadF*, *racR* and *dnaJ* genes are involved in the steps of adhesion and colonization in host cells. The objective of this study was to identify the pathogenic capacity of *Campylobacter jejuni* sheep feces isolates through the presence of the *cadF*, *racR* and *dnaJ* genes. A total of 421 faecal samples collected from sheep from 20 herds were analyzed. Of these samples, 11 were positive for *Campylobacter jejuni* and had their DNA extracted from the kit "Qiagen DNA Easy Blood and Tissues". 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 Blue Green and visualized with UV light. The results revealed that all the isolates possessed the *cadF* and *racR* genes. As for the *dnaJ* gene, 81.82% (9/11) of the isolates were positive. This result demonstrated the great pathogenic potential of the isolates of *Campylobacter jejuni*, with the sheep species involved in the epidemiological chain of the agent. It is necessary to implement strict control measures both in the management of rearing animals as well as in slaughtering to avoid contamination of the carcass.

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

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