

## INTESTINAL MICROBIOTA OF HEALTHY AND DIARRHEA SUFFERING SHEEP

(MICROBIOTA INTESTINAL DE OVINOS HÍGIDOS E COM DIARREIA)

D. F. R. FRIAS<sup>1</sup>, D. I. KOZUSNY-ANDREANI<sup>2</sup>

This study isolates and identifies bacteria and fungi present in the intestinal tract of healthy and diarrhea suffering sheep. We collected stool samples from 50 healthy animals and 16 animals with diarrhea. Harvesting was performed by introducing swab in the animal rectum. This material was placed into tubes containing Stuart transport medium, then cultured in media selective for *Staphylococcus*, *Salmonella/Shigella*, *Listeria*, *Bacillus cereus*, *Clostridium*, *Pseudomonas*, fungi were isolated using the Sabouraud dextrose agar medium. The gram-negative bacteria isolated were identified by the API 20 E. system, whereas Gram-positive bacteria were subjected to the tests: coagulase, catalase, NaCl 5%, oxidase, novobiocin and DNase. Yeasts were plated on CHROM agar and subsequently identified by germ tube formation, urease tests and fermentation of carbohydrates. Agents isolated from samples of diarrhea suffering sheep were evaluated for susceptibility to antimicrobial agents by plate diffusion method on Muller Hinton agar. It was observed that healthy sheep flora was constituted by gram-positive bacteria: *Staphylococcus aureus*, *S. intermedius*, coagulase-negative *Staphylococcus*, *Lactobacillus*, *Bacillus cereus*, *Clostridium perfringens*, *Listeria* spp. and *Listeria monocytogenes*; as well as the Gram-negative bacteria: *Escherichia coli* (enteropathogenic), *Salmonella* spp. and *Pseudomonas aeruginosa*, and fungal species *Candida albicans*. In animals suffering from diarrhea, it was found that the causative agent was the enteropathogenic *Escherichia coli*. The strain of *E. coli* isolated showed a wide resistance to the tested antibiotics, including tetracycline, ampicillin, norfloxacin, sulfazotrim, erythromycin, oxacillin, penicillin, ciprofloxacin, nalidixic acid and cephalothin. It was concluded that sheep intestinal flora has a large amount of bacteria, some pathogenic that have no deleterious effects when the animal is healthy. It was also evident the importance of identifying the causative agent of diarrhea, and in case of bacterial diarrhea, performing an antibiogram in order to select the best antibiotic to treat the condition in the most effective way.

<sup>1</sup> Doutora em Medicina Veterinária Preventiva. Bolsista DCR CNPq/ Embrapa Gado de Corte

<sup>2</sup> Professora Adjunta. Departamento de Microbiologia, UNICASTELO/ Fernandópolis

\* danila.frias@colaborador.embrapa.br