

**Adherence pattern and cytotoxicity of commensal and diarrheagenic *E. coli*
isolated of children without diarrhea**

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Escherichia coli is a group of non-pathogenic bacteria that is part of the intestinal tract of humans and animals, with an optional primary bacteria present in the intestine. During the process of evolution of some *E. coli* clones acquired virulence genes that are contained in pathogenicity islands and plasmids which provided further adjustments and their ability to cause a broad spectrum of diseases. *E. coli* diarrheagenic (DEC) comprise a group of pathogens associated with intestinal infection in both children and adults, and is classified into six pathotypes according to their specific virulence mechanisms, clinical syndromes, serotypes O: H, epidemiological and / or types of interactions with cell lines. DEC identification can not be based solely on criteria culture and biochemical tests, since they are indistinguishable from commensal *E. coli*. The aim of this study was to evaluate the patterns of adhesion and cytotoxicity of strains the commensal and diarrheagenic *E. coli*. They were analyzed 96 strains of *E. coli* of children without diarrhea, being differentiated in commensal and diarrheagenic by PCR to genes (*eae*, *bfp*, *elt*, *est*, CVD432, *aggr*, *ipaH*, *stx1*, *stx2*). The adhesion test was performed on HeLa cells in incubation periods of 3 to 6 hours, and cytotoxic test was performed in Vero cells at 3 and 6 hours. In our results we obtained 96 strains of *E. coli* are 75 (78%) identified as commensal and 21 (22%) as diarrheagenic (11 (52%) EAEC, 6 (29%) EPEC, 2 (9,5%) ETEC, 2 (9,5%) STEC). The adhesion test, observed adherence patterns from to 3 hours. Among adherence patterns observed, diffuse adhesion were the most frequent in commensal 91 (95%) and 5 (5%) diarrheagenic *E. coli*. The aggregative patterns were found in 2 strains (1 commensal and 1 EPECa), localized adherence (1 commensal) and localized-like (1 commensal and 1 EAEC). The cytotoxicity test, observed in Vero cell both toxins the ETEC and STEC showed a high elongation and cell shift effect in 3 hours, with no difference between the effects of the

toxin. In conclusion, this study showed asymptomatic patients toxins from *E. coli* can be expressed, and that the pattern of diffuse adherence was prevalent in commensal and diarrheagenic.

keywords : adhesion, cytotoxic, Escherichia coli, children.