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**Identification and characterization of putative adhesins of atypical enteropathogenic
Escherichia coli that bind to extracellular matrix components**

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Atypical Enteropathogenic *Escherichia coli* (aEPEC) has been a cause of diarrhea in developing and industrialized countries. The major mechanism aEPEC pathogenesis is a lesion called attaching and effacing (A/E), which is characterized by intimate adherence of the bacteria to the intestinal epithelium and destruction of microvillus. Even so, it represents a heterogeneous group and other virulence factors may be involved in aEPEC pathogenesis. Previously, we have identified one isolate of atypical EPEC, serotype O26:H11, which secretes proteins that interact with extracellular matrix components (ECM). The interactions between pathogenic bacteria and ECM molecules such as fibronectin, laminin and collagen may play an important role in the bacterium adherence to host cells, which is critical for successful *E. coli* colonization of gastrointestinal tract and usually mediated by adhesins. The aim of this study is to identify and characterize putative adhesins that may contribute to the binding of the isolate of aEPEC to ECM. The supernatant of the above mentioned aEPEC isolate was submitted to a solid phase binding assay with matrigel, the adhered proteins were stripped from the wells, separated by SDS-PAGE, transferred to nitrocellulose membranes and submitted to immunoblotting assay. Three major proteins of apparent molecular weights of 107, 44 e 35 kDa were recognized by a polyclonal serum produced in rabbit immunized with the isolate's supernatant. Besides, we observed that in the presence of ECM components the adherence pattern and the number of adhered bacteria to HEp-2 cells are modified. The aEPEC do not share a unique virulence pattern, suggesting that many virulence factors may contribute to the pathogenesis. The identification of proteins involved in the adhesion with extracellular matrix components in one isolate of this category of diarrheagenic *E. coli* will confirm the heterogeneity among the aEPEC.

Keywords: atypical EPEC, adhesins, ECM