Study of systemic immune response in mouse after inoculation by differents immunization routes with *Escherichia coli* O86:H34 strain alive or formalin-killed.

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Enteropathogenic *Escherichia coli* is one of the major ethiologic agents that causes infectious diarrhea both in infants and in adults individuals . EPEC infections are prevalent in countries in development, mainly in low social-economic populations, as those found in Brazil. The immune response to this infection is still insufficiently known . The use of new technologies in the development of vaccines has been reinforced the importance of taking in account the natural route of infeccion of pathogens and use of it in investigation on immune response to be elicited against a certain to infectious agent.The aim of the present investigation was to study the immune response in mice inoculated with dead or alive bacteria, by means of diverse immunization routes, using the *E. coli* O86:H34 strain and the *E. coli* O127:H6 prototype were employed for immunization . *E. coli* strain belonging to O86:H34 sorotype,was isolated from faeces from infants with diarrhoea. The strains: E2348/69, E2348/69 flic-, E2348/69 Δtir, E2348/69 EscN-, CVD 206 ΔeaeA, UMD 872 ΔEspA, UMD 874 ΔEspB, UMD 870 ΔEspD. were employed . BALB/c mice were inoculated by intragastric route with alive *E. coli* O86:H34 strain or formalin -killed O86:H34 and O127:H6 strain intragastric and intramuscular immunizations routes .
The specific antibodies of isotypes IgA, IgG and IgM were determinated by means of ELISA and the course of the immune response for important antigens that participate in the patogenicity mechanism of bacteria could be analysed . By means of reactivity profile on immunobloting, the specificity of the antibodies present in obtained sera against whole cells or the outer membrane complex of the bacteria were analysed . Immune response to proteins, like EspA, EspB, Tir, intimin, flagelin e BFP in immunized mice , may have an important meaning in the elucidation of infection in this patogen. At the first time a research using different routes of immunization with EPEC strains in mice has been conducted . This study allow to compare antigens from *E. coli* recognized in natural or experimental human infection and consequentently these data may help in the elucidation of this complex mechanism of pathogenicity, and also to orientate the selection of peptides to be used in preparation of specific vaccines.

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