Title: GENOTYPIC CHARACTERIZATION OF DIARRHEAGENIC Escherichia coli FROM WATER SAMPLES FOR HUMAN CONSUMPTION OF LONDRINA CITY, PR.

Authors: Schuroff, P.A.¹, Burgos, T.N.¹; Lopes-Dambrozio, A.M.¹; Burgos, C.N.¹; Klein, A.L.¹; Lima, N.R.¹; Elias Junior, A.R.¹; Rechenchoski, D.Z.¹; Pelayo, J.S.¹

Institution: ¹UEL – Universidade Estadual de Londrina (Rodovia Celso Garcia Cid, Pr 445 Km 380, Londrina, PR)

Abstract
Water is an essential resource for sustaining life on Earth, but in recent years its quality has been compromised by inadequate sewage disposal in rivers and springs what it is be able to contaminate several people. Among the various microorganisms found in contaminated water highlight Escherichia coli bacterium. Although commensal, some strains of this species may cause gastroenteritis, thus these strains represent a major causative agent of diarrhea in children and adults in developing countries. So, this study aims to evaluate genotypically 500 E. coli strains to determine the presence of virulence genes (eae, bfp, stx1, stx2, aggR and ipaH) associated with the main groups of diarrheagenic E. coli: EPEC (enteropathogenic E. coli) typical and atypical, STEC (Shiga toxin-producing E. coli), EAEC (enteroaggregative E. coli) and EIEC (enteroinvasive E. coli) by Polymerase Chain Reaction (PCR) technique. These isolates were obtained from 250 drinking water samples in the years 2012 to 2014, in Londrina city, state of Paraná, Brazil. Of the 250 water samples analyzed eight (3.2%) were positive for eae gene and negative for bfp gene, therefore classified as atypical EPEC. Four samples (1.6%) were positive for ipaH gene being included in EIEC pathotype. Three samples (1.2%) were classified as STEC and of these samples; two were positive for stx1 sequence and positive for stx1 and stx2 sequences. None had the aggR gene, thus negative for EAEC pathotype. Under these circumstances, according to the results found hope awareness both population and public agencies of the importance of microbiological control of water supplied to the population to prevent infectious disease outbreaks related to diarrheagenic E. coli on water from the public water supply systems in the region of Londrina, Paraná.

Keywords: water, diarrheagenic Escherichia coli, PCR.

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