



Comparative genomics of E. coli isolated from adult and paediatric patients with inflammatory bowel disease and controls

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Abstract:

Inflammatory bowel disease (IBD) is a global disease, andit'sprevalence and incidenceisincreasing worldwide along with urbanization.Several lines of evidence implicate bacteria in the pathogenesis of IBD, and Escherichia coli is one of the leading candidates for a pathogenic role. The aim of the present study was to identify genes of E. coli associated with strains isolated from patients with IBD.

This study involved whole genome comparisons of 179 E. coli strains, isolated from 64 patients with Crohn's disease (CD), and 19 controls. Of the 114 isolates from CD patients, 23 were from paediatric patients. Anatomically, 7 were derived from aphthous ulcers, 9 from lymph nodes, and 75 from mucosal biopsies. CD-associated E. coli were phylogenetically diverse. Based on total gene content, CD isolates were significantly associated with particular genes associated with adhesion, the toxin-antitoxin system, plasmid partitioning, conjugation transfer, and signal recognition when compared to controls.

Biography:

Mukta Das Gupta is a PhD student at Medical School of Australian National University (ANU). She obtained her bachelor degree in Doctor of Veterinary Medicine (DVM) and Masterof Science (MS) in Microbiology at Chittagong Veterinary and Animal Sciences University, Bangladesh.

Recent Publications:

 M Das Gupta, et al; Polymorphism of fecundity genes (BMP15 and GDF9) and their association with litter size



in Bangladeshi prolific Black Bengal goat; 2020

- 2. M Das Gupta, et al; Occurrence of antimicrobial resistant genes among shiga toxin-producing Escherichia coli isolated from sheep in Chittagong, Bangladesh; 2019
- 3. M Das Gupta, et al; Occurrence of Escherichia coli carrying Shiga toxin-producing genes in buffaloes on smallholdings in Bangladesh; 2018
- 4. M Das Gupta, et al; Genetic and phenotypic parameter estimates for body weight and egg production at sexual maturity in Hilly×Fayoumi crossbred chickens; 2018
- 5. M Das Gupta, et al; An explorative study on visitor's behaviour and their effect on the behaviour of primates at Chittagong zoo; 2017

World Microbiology Summit; April 24, 2020; London, UK

Citation: M Das Gupta; Comparative genomics of E. coli isolated from adult and paediatric patients with inflammatory bowel disease and controls; Microbiology 2020; April 24, 2020; London, UK