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## Enhanced detection of enteropathogens in children with acute gastroenteritis - A prospective study

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Acute gastroenteritis (AGE) is a very common childhood condition. Current pathogen-specific disease burden may be inaccurate due to bias introduced by difficulties in obtaining stool samples, the low sensitivity of classic diagnostic assays and the inability of laboratories to conduct testing in vomiting-only cases. The Alberta Provincial Pediatric Enteric Infection TEam (APPETITE) conducted a prospective study to detect enteropathogens causing diarrhea and/or vomiting in Albertan children using enhanced specimen collection and advanced diagnostic assays. Children under 18 years of age with AGE were recruited through two pediatric Emergency Departments (ED) and a telephone Health Advice Service (HLA). Rectal swabs and stool samples were collected and tested for 5 viruses, 9 bacteria and 3 parasites using enteric bacteria culture assays, an in-house RT-qPCR gastroenteritis virus panel and the Luminex xTAG GPP. 2,427 children with AGE were enrolled in the EDs and 647 were enrolled via HLA from Dec 2014 to Jan 2018. 72.9% (n=2,199) of the 3,018 symptomatic patients tested positive for  $\geq 1$  enteropathogen. Norovirus was the most commonly detected pathogen (n=807, 26.7%), followed by adenovirus (n=563, 18.7%) and rotavirus (n=507, 16.8%). Sapovirus (n=297, 9.8%) and astrovirus (n=106, 3.5%) were less prevalent. *Clostridium difficile* was detected in 14.4% (n=436) of AGE cases. Excluding *C. difficile*, other enteric bacteria and parasites were detected in 5.9% (n=176) and 16 (0.5%) patients, respectively. This study provides a better understanding of the relative proportion of enteropathogens in children with AGE.

## Biography

Xiaoli Pang obtained her B.M Diploma in Dec 1982 from the Faculty of Medicine, South-East University, Nanjing, China and completed her PhD in 2000 from the University of Tampere, Finland. She is a Professor in the Department of Laboratory Medicine and Pathology University of Alberta, and a Principal Investigator in Li Ka Shing Institute of Virology, and a Program Leader in Provincial Lab for Public Health, Alberta, Canada. She has held numerous research grants and published approximately 90 peer review papers and book chapters.

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