







Special Issue Reprint

# Diagnosis, Epidemiology and Transmission Dynamics of Cryptosporidium spp. and Giardia duodenalis

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The enteric protozoans Cryptosporidium spp. and Giardia duodenalis are the most common diarrhoea-causing protozoan parasites worldwide. Cryptosporidium spp. is a leading cause of diarrhoea morbidity and mortality in children younger than 5 years of age in poorresource settings in sub-Saharan Africa and South Asia. Although infection by G. duodenalis is rarely a fatal condition, giardiasis is commonly associated with childhood growth faltering and cognitive impairment. Because of their significant socioeconomic impact, particularly in low-income countries, giardiasis and cryptosporidiosis joined the "Neglected Disease Initiative" launched by the World Health Organization in 2004. Both Cryptosporidium spp. and G. duodenalis are ubiquitous in the environment and can infect a wide range of hosts with different specificities, meaning that humans may acquire the infection via waterborne, foodborne, or zoonotic transmission. Recent advances in detection and molecular epidemiology have indicated that certain species/genotypes of Cryptosporidium and G. duodenalis have an expanded range of suitable hosts, suggesting that their transmission pathways are more intricate than previously thought, challenging our current notion of host specificities. Therefore, there is a clear need for more studies that aim to investigate the frequency and molecular diversity of these parasites in humans, production and companion animals, and wildlife species. This information would be extremely useful to elucidate the lynamics of cryptosporidiosis and giardiasis and tordaresegate inthe payact

zoonotic events to human infections.

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