

## Molecular detection of *Eimeria acervulina* isolated from broiler birds

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**ABSTRACT:** The present study reports the histopathological, haematological and biochemical changes in broiler chicken naturally infected with *Eimeria acervulina*. A polymerase chain reaction (PCR) was used to identify this species in 225 gut samples of broiler chicken from different farms in North Eastern (NE) region of India. Postmortem examination revealed greyish white transeversely elongated area on the serous surface, edema, together with necrosis and sloughing of intestinal epithelium. Haematological changes included a decrease in haemoglobin (Hb) and packed cell volume. The value of mean corpuscular haemoglobin concentration (MCHC), on the other hand increased slightly. Biochemical changes showed a significant increase in the level of glucose, cholesterol, Alanine amino transferase (ALT), Aspartate amino transferase (AST) and Alkaline phosphatase. The PCR assay was based on internal transcribed spacer (ITS1) region of the ribosomal DNA of *Eimeria* sp. which has shown interspecies variation that enables to differentiate the species. The six isolates of *Eimeria acervulina* obtained were sequenced and