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ELISA detection of ascarid and hookworm coproantigen in dogs and cats.

David Elsemore*, Jennifer Cote, Rita Hanna, Jinming Geng, Phyllis Tyrrell. IDEXX Laboratories, Inc., Rapid Assay, Westbrook, ME.

Ascarid and hookworm infections in dogs and cats are classically detected by identification of the eggs by fecal flotation. New technology may shed light on detection of adult ascarids and hookworm in the absence of positive egg flotation data. Here we describe the development of two coproantigen capture ELISAs that detect either ascarid or hookworm infections in dogs and cats. Specific antibody reagents on both the solid and liquid phase of the ELISA allow detection of infections in experimentally infected dogs. Lack of cross reaction with other experimental nematode infections demonstrates assay specificity. Identification of field samples positive for different species within the ascarid or hookworm groups demonstrates assay breadth of detection within each group of nematodes. Analysis of a 1000 member canine and feline field fecal sample population shows application of these assays may increase the frequency of detection. Ascarid flotation egg positive, ELISA negative field samples were further characterized by a second flotation and PCR. Evidence of exogenous eggs by coprophagy or environmental contamination is discussed.