Comparison of In-Clinic Diagnostic Testing Methods for *Macrorhabdus ornithogaster*

Hamish R. Baron BVSc (Hons), FANZCVS (Avian Medicine and Surgery), Ben C. Stevenson BSc (Hons), MSc, PhD and David N. Phalen DVM, PhD

Abstract: *Macrorhabdus ornithogaster* is an ascomycete yeast that is often found at the isthmus of the ventriculus and proventriculus of infected birds. Antemortem diagnosis has traditionally involved direct visualization of organisms on wet-mount or Gram-stained fecal preparations and/or cloacal and crop swabs; however, different in-clinic diagnostic techniques have never been compared to establish an optimum test for the identification of *M. ornithogaster* in an avian patient. We compared 5 microscopically-evaluated diagnostic testing methods; fecal Gram stain, direct fecal wet preparation, macro suspension technique, macro suspension with Gram stain, and macro suspension stained with new methylene blue. Each technique was performed on 96 fecal samples collected during the treatment of *M. ornithogaster* infected budgerigars with water-soluble amphotericin B. The macro suspension technique produced statistically higher organism counts than the other 4 techniques and was always estimated to have the largest detection probability. We recommend that the macro suspension technique be implemented as the most efficacious diagnostic test for in-clinic assessment of avian patients possibly infected *M. ornithogaster*. 