Cairo University
Faculty of Veterinary Medicine
Department of Microbiology

Rapid detection of *Helicobacter* species from dogs and cats.

A thesis presented by:

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B.V. Sc., Fac. Vet. Med., Cairo Univ., (2012).

For M. V. Sc. Degree in Microbiology

(Bacteriology, Mycology and Immunology)

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2020

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سورة العلق

الآية (٥)

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Specification: Microbiology

Thesis title: Rapid detection of *Helicobacter* species from dogs and cats.

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Abstract:

Helicobacteriosis is worldwide infection caused by *Helicobacter* species. It affected both human and animals. The study investigates *Helicobacter* species in companion animals (dogs and cats) and its zoonotic and public health repertoire. Samples were collected from apparently healthy companion animals (70 dogs and 65 cats) and 70 human patients in contact with the companion animal from Cairo and Giza governorates. The samples included serum samples, faeces and stool samples and biopsies of gastric fundus fragments 5 mm approximately. All samples examined by culture, biochemical, serology and molecular identification. The study reveals 43.4% *Helicobacter* species by PCR. *H. heilmannii* is more predominant with ratio 16% and *H. pylori* reveals 6%, while all samples were negative for *H. felis*. All *Helicobacter* isolates were resistant to azithromycin, ceftazidime and kanamycin (100% each). While they were sensitive for clarithromycin (100%), tetracycline (95%), metronidazole (55%) and amoxicillin/clavulanic acid (55%). In conclusion, dogs and cats are reservoir and play a major transmission route for human helicobacters infection.

Key words: Biopsy, Helicobacteriosis, *H. felis*, *H. heilmannii*, *H. pylori*, PCR.

DEDICATION

I would like to dedicate this thesis and every lasting gratitude to my family: -

My Mother

My Father (peace up on him)

My brother

My two sisters

My brother in law

And

My sister in law

Acknowledgment

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