Cairo University.
Faculty of Veterinary Medicine.
Department of Zoonoses.

-Name: Fatma Karam Abdel kader
-Date of birth: 30-6-1989
-Nationality: Egyptian.
-Degree: Master of Veterinary Science. **-Specialization**: Zoonoses.
-Title of thesis: prevalence of some enteropathogens of zoonotic importance in fish and fish products.
- Supervisors:

Prof. Dr. Maha Ahmed Sabry

Dr. Khaled Abd El- Aziz Abd El- Moein

Abstract

The release of fecal pollution into aquatic environment may create environmental reservoirs of feces derived micro-organisms, including pathogens. *Salmonella species* and *Clostridium perfringens* are which commonly used as fecal indicator that represents human pathogens. Therefore, this study was initiated to investigate the role of fish and fish products in transmitting of these micro-organisms to man. A total of 791 different samples (536 fish samples, 135 canned fish products, 11 water samples and 109 human samples) were randomly collected from markets in El Giza and aquaculture in El-Fayoum Governorates. *Salmonella species* were isolated from cultured samples and identifying them by biochemical tests (traditional and RapID ONE). The occurrence of *Salmonella species* in fish, fish products, water and human samples was 0.4, 0.7, 0.0 and 1.8% respectively. On other hand, isolation and identification of *C.perfringens* in fish, fish products, water and human samples evidenced that 41, 17.8, 27.3 and 65.1% respectively, were positive for this pathogen. The pathogencity of *C.perfringens* is associated with its expression of multiple toxins therefore; typing of the suspected *C.perfringens* isolates was done using multiplex PCR. The most dominant type was *C.perfringens* type A as evidenced by PCR and toxin gene profiles, whereas, the identified 307 isolates collected from fish (211), fish products (24), water samples (2) and human samples (70) influent as *C.perfringens* type A. Additional, *cpb* (type C) and *iA* (type E) toxin genes were detected in 2 (0.9%) and 7 (3.2 %) isolates originated from fish samples collected from aquaculture in El-Fayoum Governorate, respectively, As well as 3 (1.4 %) isolates were type A with additional enterotoxin gene. This work presents evidence that fish, water, fish products influent are reservoirs for potentially pathogenic micro-organisms. Thus, it becomes essential to determine the hygienic quality of fish and fishery products as sold in the markets so as to safeguard the consumer's health.

(Key words: Fish- Canned fish products- Water- Human -*Clostridium perfringens* - *Salmonella species* - Enterotoxin gene).