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ثبكة المعلومات الجامعية







## HUMAN CRYPTOSPORIDIOSIS IN DIFFERENT GROUPS OF IMMUNOSUPPRESSED PERSONS

Thesis

SUBMITTED FOR PARTIAL FULFILLMENT OF MASTER DEGREE IN PARASITOLOGY

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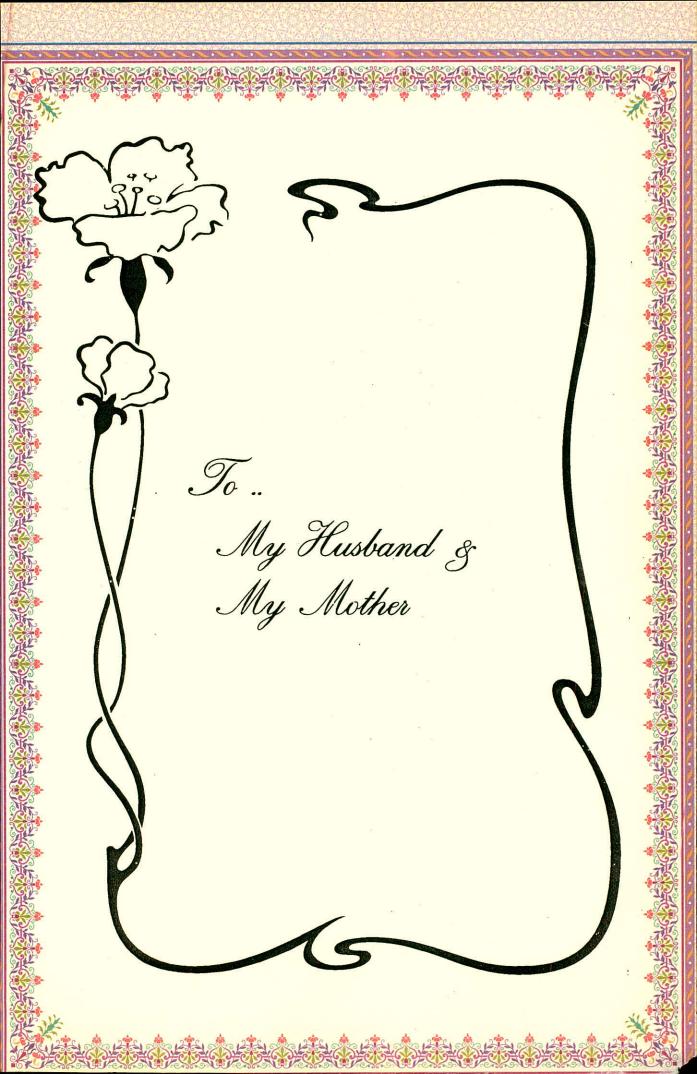
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#### **INTRODUCTION**

Cryptosporidium is a coccidian parasite found in the intestinal and respiratory epithelia of reptiles, birds, fish and mammals (Tzipori, 1983 and Navin & Juranek, 1984).

Several species of the parasite have been described from a variety of vertebrates (Fayer and Ungar, 1986). The species of Cryptosporidium that infects humans and most mammals is Cryptosporidium parvum (Current, 1988).

Cryptosporidium has been reported world-wide both in immunocompetent and immunocompromised patients and it is now considered as one of the most important opportunistic infective agents in patients with acquired immunodeficiency syndrome (AIDS) (Chacin-Bonilla et al., 1993).

In immunocompetent individuals, infection is associated with acute self-limiting diarrhoeal illness, but in immunocompromised hosts can cause protracted diarrhoea with accompanying malabsorption, dehydration, and electrolyte imbalance (Khashba et al., 1989).

It has been suggested that domestic animals may act as reservoirs of infection for susceptible human individuals (Tzipori et al., 1980). Man to man transmission has also been

suggested (Koch et al., 1984). Transmission via contaminated drinking water, outdoor and indoor recreational waters and municipal water are also well documented (Graczyk et al., 1996).

Cryptosporidiosis is diagnosed by identifying organisms in intestinal biopsy material and by detecting oocysts in stool specimens (Markell et al., 1992). A large number of staining techniques have been used to detect oocysts in the stools. The most widely used have been the modified acid-fast procedures (Fayer and Ungar, 1986).

So far, no safe and effective form of treatment has been identified (Juranek, 1995). However, spiramycin was reported to be somewhat effective (Whiteside et al., 1984).

Due to increasing numbers of patients with documented infection with *Cryptosporidium*, this work is intended to select the most specific and sensitive method for diagnosis of oocysts in the stools. Also, to evaluate the efficacy of spiramycin in the treatment of cryptosporidiosis in infected humans. In addition, this work includes a study on experimentally infected animals in order to determine susceptibility in different hosts and to study the pattern of infection in them.