CHAPTER FOUR

DIFFUSABLE ANTIGEN(S) PRODUCED BY SECOND GENERATION SCHIZONTS OF EIMERIA NECATRIX

INTRODUCTION

Soluble, antigenic substances, toxins and enzymes have been isolated, identified and extracted from many pathogenic protozoal agents (Pierce, Long, and Horton-Smith, 1962; Rose and Long, 1962; Lykins, Smith, Voss and Bistic, 1971; Soni and Cox, 1974, 1975a,b,c; Tizard, Sheppard and Neilson, 1978; Tizard, Neilson, Seed and Hall, 1978; Cursons, Brown, Keys, 1978; Bos, 1979; El-on, Schnar and Greenblatt, 1979; Santoro, Bernal, Capron, 1979; O'Daly and Aso, 1979; Grothus and Kreier, 1980). Cursons and his co-workers (1978) showed that pathogenic free-living amoebae produce greater amounts of phospholipase A and B in comparison to the non-pathogens. Thus, they believed that the high level of phospholipase A production in the pathogenic strain may explain the observed differences in invasiveness and virulence between these amoebae. Using monolayers of baby hamster kidney cells, Bos (1979) has demonstrated that Entamoeba histolytica may kill host cells by contact or, in the absence of serum, by an endocellular toxin. He believed that such a toxin is actively involved in the pathogenesis of an amoebic abscess, where infarcts may cause the absence of serum. It has been shown that cell-free extracts of Leishmania donovani, L. mexicana and Trypanosoma cruzi contain a factor that induces lysis of mammalian red blood cells and vero cells (O'Daly and Aso, 1979). Tizard et al. (1978) have comprehensively reviewed the biologically active products of