1. INTRODUCTION

Dicrocoeliosis is a parasitic infection caused by trematodes of the genus *Dicrocoelium*, affecting the bile ducts and gall bladder of wild and domestic mammals, mainly ruminants.

Dicrocoelium spp. and dicrocoeliosis is little studied by researchers, as the scant literature attests, and often underestimated in the field by veterinarians and animal-keepers (OTRANTO and TRAVERSA, 2003).

Many factors lead to this lack of attention for *Dicrocoelium* spp. and dicroceliosis. First of all this small trematode is less pathogenic than the other better known liver fluke *Fasciola hepatica,* and its symptomatology is often masked by other infections.

Moreover, the epidemiology of dicrocoeliosis is complex involving two intermediate hosts, each with peculiar ecological features.

Even diagnosis is not always reliable and sensitive. It is usually based on the detection of eggs in the faeces of the infected animals (FERRE *et al.*, 1994), although AMBROSI (1991) pointed out that in sheep with less than 100 flukes the test is usually negative.

Also control and treatment with ordinary protocols often fails, because efficacy is reached with higher dosages than those used for routinary treatment in ruminants against gastrointestinal nematodes, lung worms and fasciolosis.

In spite of this scant consideration *Dicrocoelium spp.* is widespread, and its impact is not properly quantified. Moreover, in case of long-term infection dicrocoeliosis may cause progressive hepatic cirrhosis, shorten the reproductive life and decrease wool production and lactation.

An improvement in diagnostic methods could be achieved through development of serological methods, in order to increase sensitivity, above all, for detection of moderate infection. Those methods could also allow processing of many samples in a relative short time, which would be useful in sheep flock health management.

The aim of the present study is to develop an indirect ELISA test, that would allow detecting anti-*Dicrocoelium* antibodies in infected sheep. Such a diagnostic tool, if properly implemented, could perform early, reliable, quick and cheap diagnosis, and allow large-scale screening.

Moreover, it could be helpful in studying the distribution of *D. dendriticum*, and help to plan control strategies and effective treatments, avoiding abuse of drugs and economical losses.