# 8th International Congress Of Parasitology

**10-14 OCTOBER 1994**
**İzmir-TURKEY**

# *Abstracts*

## *Volume 1*

CONFERENCES [LECTURES]
SYMPOSIA
ROUND TABLES
FREE COMMUNICATIONS
ORAL SESSIONS

EIGHTH INTERNATIONAL CONGRESS OF PARASITOLOGY
ICOPA VIII
10-14 OCTOBER 1994
İZMİR - TURKEY


*Editors in Chief*
M.Ali ÖZCEL
M.Ziya ALKAN



ORGANIZED BY TURKISH SOCIETY FOR PARASITOLOGY

## Po41.09(391) EVALUATION OF DIFFERENT DOSES OF FENBENDAZOLE POUR-ON IN THE REDUCTION OF GASTROINTESTINAL AND LUNGWORM NEMATODES IN CALVES

Quiroz R.H.*, **, Manga-González M.Y.*, Campo R.*

* Consejo Superior de Investigaciones Científicas (CSIC), Estación Agrícola Experimental, Apartado 788, 24080 León, Spain. ** Facultad de Medicina Veterinaria y Zootecnia, Universidad Autónoma de México, México, DF. 04510.

Two studies were carried out (in July and October, 1992) to evaluate the efficacy of various doses of fenbendazole pour-on formulation on gastrointestinal and lungworm nematodes, in *Bos taurus* and *Bos indicus* cross-bred calves from Las Margaritas estate, Centro Experimental Pecuario (Puebla State, Mexico) in a tropical region. Five batches from 11 to 13 calves, naturally infected with gastrointestinal nematodes, were used in the first study. Batches 1, 2 and 3 were treated with doses of 5, 7.5 and 10 mg/Kg and batch 5 was the control. Efficacy, calculated using the Powers *et al.* formula (*Vet. Parasitol.*, 1982), in eggs per gram of faeces (e.p.g.) reduction in the treated batches, 7 days post-treatment, was 82.01%, 98.35%, 96.42% and 93.40%, respectively. Four batches of 12 calves, infected with gastrointestinal nematodes and positive to *Dictyocaulus viviparus* larvae were used in the second study. Three were treated with 5, 7.5 and 10 mg/Kg fenbendazole pour-on and batch 4 was the control. The efficacy of these doses in reducing e.p.g. gastrointestinal nematodes was 99.33%, 99.16% and 100%, respectively, and 100%, 91.66% and 100% in reducing positive samples of *D. viviparus* larvae. The moderate fall in efficacy of pour-on fenbendazole in first study may be due to washing out of the anthelmintic by heavy rain after treatment. Statistically significant differences (for $p \leq 0.05$) in the efficacy of fenbendazole between the batch in the first study treated with 5 mg/Kg pour-on formulation and each of the other batches, for both studies, treated in the same way, were detected using one-way analysis of variance and the LSD test. According to the infective larvae, obtained in the coprocultures for each batch, the following genus of gastrointestinal nematodes were identified: *Haemonchus, Trichostrongylus, Cooperia, Oesophagostomum y Bunostomum.*

** Sabatic year in Spain supported by Spanish DGICYT Ref. SAB94-0139 and the UNAM (Mexico D.F.)

## Po41.10(99) THE INFLUENCE OF ANTIHELMINTHIC PRASIQUANTEL ON THE LEVEL OF SEROTONINE IN THE TISSUES OF HYMENOLEPIS DIMINUTA AND IN THE INTESTINES OF RAT

Shalajeva N.M.,* Terenina N.B., Gerasimova E.U.**
*Moscow State University, ** Parasitology Institute RSA, Moscow, Russia

Mediators of the nervous system are most sensible under the outside influence. While data concerning already used and new antihelminthics on mediators and hormones of the parasite and the host remain very limited. Biogene amines, namely serotonine, discovered in helminthes play an important role in the regulation of many processes of the living organism, having mediator, modulator and hormone functions. The undertaken research of serotonyn level in *H.Diminuta* got from the rats, treated with highly effective antihelminthics of wide spectrum prasiquantel(50 mg/kg of animal weight), revealed the descrease of the parameter compared to the control group. Serotonine concentration in smallintestine of the invased rats increased under the influence of prasiquantel. These results broaden the idea about the mechonism of influence of prasiquantel and suggest the participation of serotonine system in this process.

## Po41.11(564) RESEARCH FOR THERAPEUTIC TARGETS FROM ENERGY METABOLISM IN THE FILARIA *MOLINEMA DESSETAE*

Marchat L., Loiseau P.M., Gayral P., Petek F.

Biologie et Contrôle des Organismes Parasites, Faculty of Pharmacy, University of Paris-South 92296- Châtenay-Malabry, France.

Several enzymes of energy metabolism from the filaria *Molinema dessetae* were studied as potential therapeutic target by comparing the enzyme properties between parasite and mammals.
The presence of PEP-carboxylase was detected in *M. dessetae*. This enzyme has not previously been identified in Helminths, which have so far been found to only possess a PEPCK. This difference was then exploited for the drug design. Phenoxycyclohexane derivatives as new lead-compound emerged as inhibitors of this enzyme system isolated from adult females. These compounds were also active *in vitro* as adult killers whereas PEP analogs were inactive.
Malate dehydrogenase (MDH) and lactate dehydrogenase (LDH) were then studied for their isoenzymes pattern and their respective properties after purification. They were evaluated as target by studying the effects of usual anthelmintics. Suramin exhibited an high inhibitory effect ($K_i$= 1.15 μM) on MDH but similar effects were observed on mammals enzymes. Moreover, analogs of pyruvate were evaluated on filarial LDH and showed slight inhibitory effect.

## Po41.12(867) EFFICACY OF MOXIDECTIN 0.2 % ORAL DRENCH AGAINST NATURAL INFECTION WITH *Dictyocaulus filaria* IN SHEEP.

Díez-Baños, N.; Pereira-Bueno, J.; Ferre, I., Hidalgo-Argüello, M.R.; Ortega-Mora, L.M. & Rojo-Vázquez, F.A.

Departamento Patología Animal: Sanidad Animal. Facultad de Veterinaria. Universidad de León. Spain.

Twenty-two Churra ewes ranging from three to six years of age were used. The ewes were housed from 4 days before the beginning of the trial until the end of the study (days 25-26). The animals were allocated into two groups of 11 animals each based on amount of *Dictyocaulus filaria* larvae per gramme of faeces (LPG) three days before treatment.

The animals in group 1 (G.1) were treated on day 0 with moxidectin 0.2 % oral drench at a dose of 0.2 mg/kg body weight; animals in group 2 (G.2) remained untreated throught the duration of the trial. All animals were weighed on day -1 and at either the time of death or slaughter; no statistically significant differences were observed.

The number of *D. filaria* LPG on the day before treatment was not significantly different ($p>0.1$) between the groups (arithmetic averages of 40.6 for G.1 and 31.2 for G.2). In the G.2, the LPG increased to a level of 108.0 by the end of the trial (day 26), whereas in the G.1 decreased to an arithmetic average of 0.5 by the first sampling time post-treatment (day 6), and were negative for all animals by the following days until the conclusion of the trial. No worms were detected at necropsy in any of the treated animals, however the control animals had an arithmetic average of 88.3 worms each.

Thus, moxidectin 0.2% drench, administered at 0.2 mg/kg body weight is 100 % effective against *D. filaria* infection in sheep. No adverse reactions to the treatment were observed in the animals.